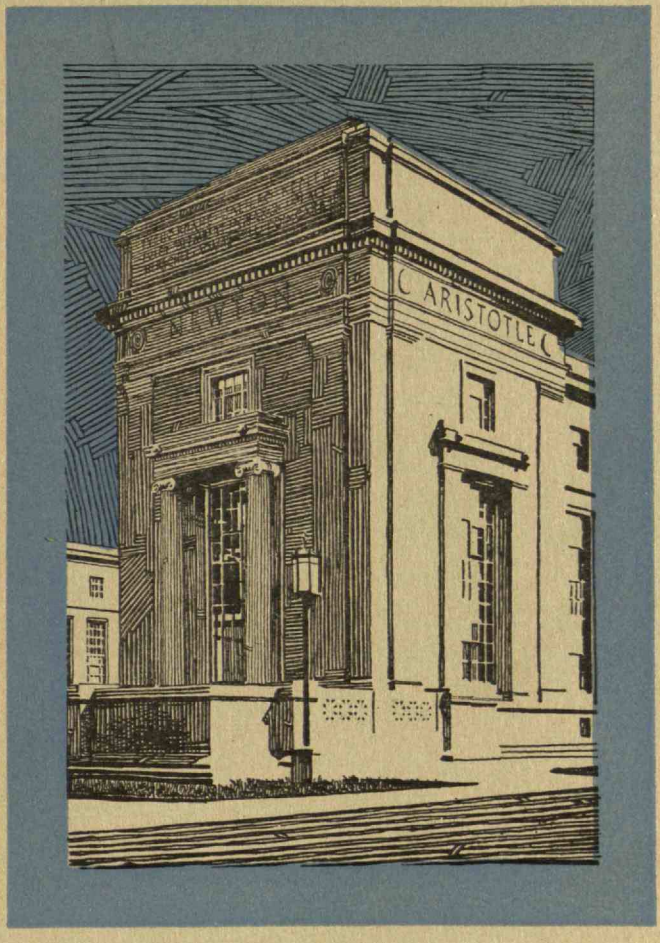
THE TECHNOLOGY REVIEW

RELATING TO THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY



JANUARY
1925

PUBLISHED BY THE ALUMNI ASSOCIATION

technology
review
Published by MIT

Thomas A. Edison and Charles P. Steinmetz in the Schenectady laboratories of the General Electric Company, where Dr. Steinmetz did his great work

Steinmetz

The spirit of Dr. Steinmetz kept his frail body alive. It clothed him with surpassing power; he tamed the lightning and discharged the first artificial thunderbolt.

Great honors came to him, yet he will be remembered not for what he received, but for what he gave. Humanity will share forever in the profit of his research. This is the reward of the scientist, this is enduring glory.

Emerson tells how the mass of men worry themselves into nameless graves, while now and then a great, unselfish soul forgets himself into immortality. One of the most inspiring influences in the life of a modern corporation is the selfless work of the scientists in the laboratories which it provides for their research.

If you are interested to learn more about what electricity is doing, write for Reprint No. AR391 containing a complete set of these advertisements.

95-940GC

GENERAL ELECTRIC

GENERAL ELECTRIC COMPANY. SCHENECTADY. NEW YORK

The Charles A. Coffin Medal awarded the Northern Texas Traction Company Fort Worth, Texas. George H. Clifford, Vice-President and Manager

FOR "THE MOST DISTINGUISHED SERVICE" TO A GREAT INDUSTRY

15,500,000,000 people rode on the electric railways last year. The honor of winning the Charles A. Coffin award to the company which during the year contributed most to the development of electric railway service goes to the Northern Texas Traction Company. This company has been under the executive management of Stone & Webster, Inc., for 19 years.

STONE & WEBSTER

INCORPORATED

DESIGN · BUILD
OPERATE
FINANCE

NEW YORK BOSTON CHICAGO

THE TECHNOLOGY REVIEW

RELATING TO THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Published monthly, from November to May inclusive, and in July at Cambridge, Mass.

Vol. XXVII No. 3

Contents for January, 1925

Cover Design by Kenneth Reid, '18

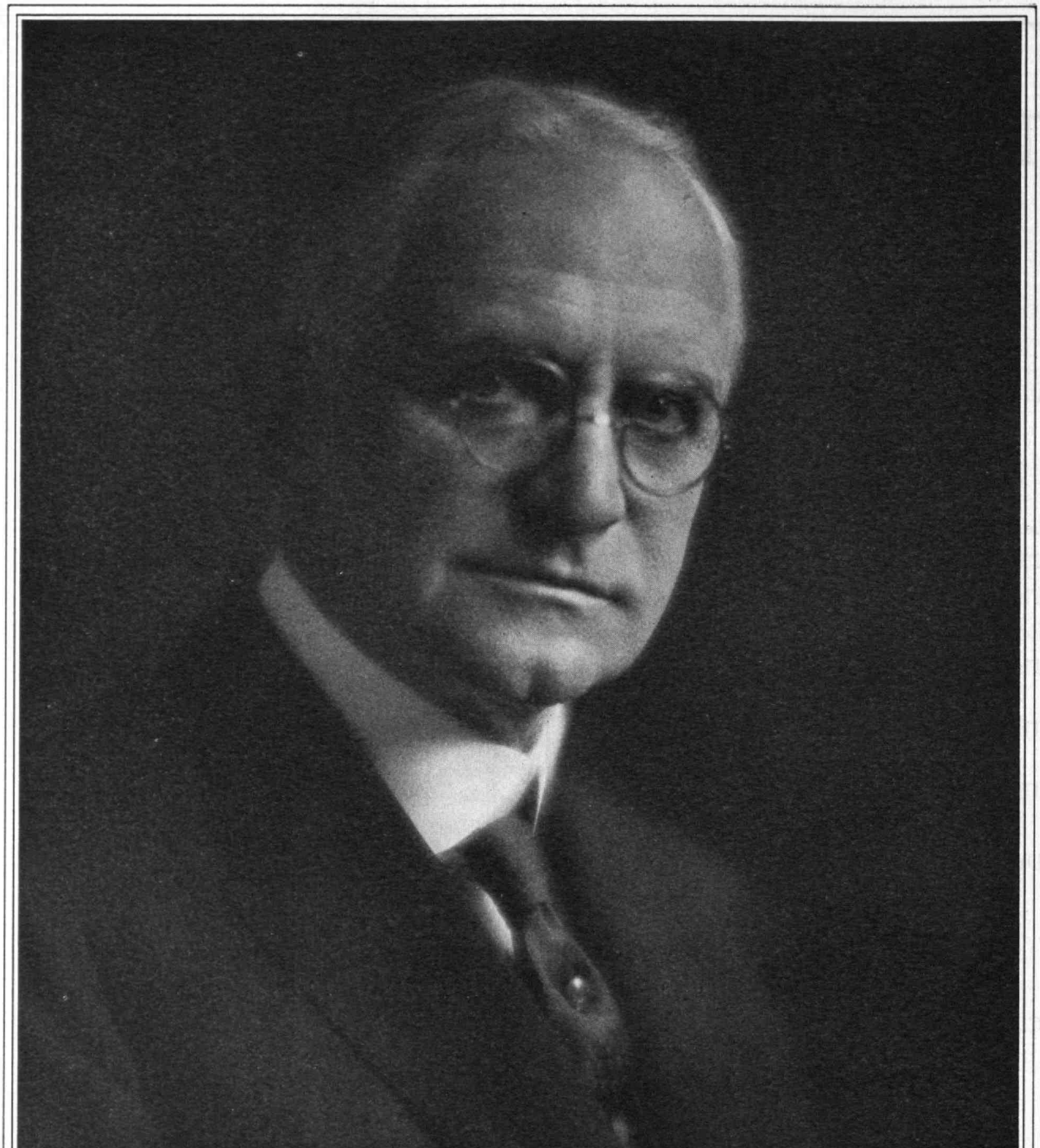
PUBLISHED BY THE ALUMNI ASSOCIATION

Thomas B. Booth, '95, *President*

Orville B. Denison, '11, *Secretary-Treasurer*

Entered as Second Class Mail Matter at the Post Office at Boston, Mass.

TERMS:—$3.50 a year, in advance; a single copy, 50 cents. To undergraduates of the Massachusetts Institute of Technology $2.50 per year, in advance; a single copy, 35 cents. Canadian and Foreign postage, 50 cents per year additional. Back numbers over three months old, 60 cents each. Three weeks must be allowed to effect changes of address. Both old and new addresses should be given.



George Eastman

THE
TECHNOLOGY REVIEW

RELATING TO THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Vol. XXVII JANUARY, 1925 No. 3

The Eastman Gift

OF breath-taking unexpectedness and princely generosity, the gift of George Eastman, announced on the evening of December 8, will benefit Technology to a minimum amount of four and one-half million dollars.

Although two or three of the Institute's financial officers knew in advance of Mr. Eastman's intent (and they for no more than a month), the latest evidence of his unparalleled generosity was as unknown to most of the Institute staff as to the general public, and the four and one-half millions came as a complete surprise. The gift is Mr. Eastman's largest single contribution to Technology, and is made entirely without restriction.

The actual legal instrument of transfer is one of considerable complexity, and runs to eleven typewritten pages. The essence of Mr. Eastman's action is given, however, in his own words to the employees of the Eastman Kodak Company. At the opening of a statement printed in full at the bottom of this page of The Review, Mr. Eastman said: "I have sold certain stocks at less than their market value (the price being payable in installments during my life), with the intention of benefiting such institutions to the amount of at least $15,000,000."

In addition to his gift to Technology, Mr. Eastman simultaneously disposed of stocks to the benefit of four departments of the University of Rochester. The Eastman School of Music receives $3,000,000; the College of Liberal Arts and Sciences, $2,500,000; the Medical School, $1,500,000; the College for Women, $1,500,000. Hampton Institute and Tuskegee Institute, now conducting a joint drive for endowment, are to receive $1,000,000 each, for the most part conditional upon the success of their drive.

These latest bestowals practically obliterate all but a small residuum of Mr. Eastman's once vast personal fortune. "For some time past," he said, "the accumulation of money personally has lost its importance to me." To a total of twenty-two different institutions and causes, Mr. Eastman has made, from time to time, large disposals having a theoretical book value of almost $59,000,000. It would be impossible to compute their actual value to the institutions he has befriended.

On December 8, Mr. Eastman made public two statements. The first was made to the "Fellow employees" of the Eastman Kodak Company; the second was to the Rochester newspapers. The Review, immediately below, reprints them both in full.

To Eastman Employees

Fellow Employees of the Eastman Kodak Company: This is to announce to you that I have sold certain stocks at less than their market value (the price being payable in installments during my life) to various educational institutions, with the intention of benefiting such institutions to the amount of about $15,000,000. The institutions in question and the minimum amount of the benefit expected to be derived by each of them are as follows:

Massachusetts Institute of Technology	$4,500,000
University of Rochester	
Eastman School of Music	3,000,000
College of Liberal Arts and Sciences	2,500,000
Medical School	1,500,000
College for Women	1,500,000
Hampton Institute	1,000,000
Tuskegee Institute	1,000,000
	$15,000,000

(The transfers to Tuskegee Institute and Hampton Institute are for the most part conditional upon their successfully completing their drive for $5,000,000, now in progress, before December 31, 1925.)

In view of the fact that you are, nearly all of you, now stockholders of the Kodak Company owing to the action of myself and of the Kodak Company, and the further fact that this transaction includes the bulk of my remaining holdings in the Kodak Company, I deem it proper to inform you that it does not indicate in any way that I am about to retire from the direction of the Company, or that my interest in its success is in any way lessened by the transaction. For some time past the accumulation of money personally has lost its importance to me and therefore my interest in the Company has not been affected by the income from its shares.

As time goes on I realize more clearly that I shall have to face the inevitable, sooner or later, and inasmuch as my major interest in life is to guard the con-

tinued success of the Kodak Company and the welfare of those whom I have brought together as its employees, I have been shaping my plans accordingly. The distribution of stock to employees was one of the first of these plans. To make that stock more valuable every year depends largely upon you all, the humblest workmen as well as the skilled experts. Things that are outside of your control might affect the stock temporarily, such as my death and the unexpected throwing upon the market of a large block of stock. One of the objects of this transaction that I am telling you about is to guard against the latter event, my stock being the last great block in existence, as the holdings of the other big owners, my old partners Strong and Walker, have been distributed without disturbance of the market.

Another principal reason for this disposition of my stock at this time is that I desire to see the money put into action during my lifetime. About sixty per cent of this particular money is to be spent in Rochester in undertakings which must largely inure to the benefit of Kodak employees and their descendants.

Among the other plans that I have made and have been carrying out is provision for the management of the Company in case of my death. For years I have been building up a staff organization which I believe is unexcelled in any company in the world, either in individual ability or coöperative spirit. With this magnificent staff I have been able, as I have grown older, to relinquish detail to such an extent that I do not look forward to the necessity of retiring for many years.

Truly yours,

GEORGE EASTMAN

To the Public

One of the reasons why I welcome this disposition of my Kodak stock is that it separates me from money making for myself, and will give me the benefit of a somewhat more detached position in respect to human affairs. I look forward with interest to finding out how much the changed conditions will affect my views on current events.

A friend of mine who had advanced knowledge of this transaction asked me why I selected these four institutions as the beneficiaries of this distribution. The answer was easy. In the first place, the progress of the world depends almost entirely upon education. Fortunately, the most permanent institutions of man are educational. They usually endure even when governments fall; hence the selection of educational institutions. The reason that I selected a limited number of institutions was because I wanted to cover certain kinds of education and felt that I could get results with the institutions named more quickly and more directly than if the money were spread. Under the best conditions it takes considerable time, sometimes years, to develop the wise expenditure of money in any line, no matter how well prepared one may be. I am now upwards of seventy years old and feel that I would like to see results from this money within the natural term of my remaining years.

The Massachusetts Institute of Technology is the greatest school of its kind in the world. It has an eminent faculty of scientific men, a splendid body of students and Alumni, a great equipment, and an outstanding board of directors to determine its policies; it is all prepared to begin to make use of these additional funds.

Almost the entire attention of educators has been thus far devoted to the white race, but we have more than ten per cent negro population in the United States, most of whom are densely ignorant. They constitute what is known as the negro problem. The only hope of the negro race and the settlement of this problem is through proper education of the Hampton-Tuskegee type, which is directed almost wholly toward making them useful citizens through education on industrial lines. These two institutions are no longer experiments. Through many years of trial they have proved their ability to turn out men and women who mostly go back to their homes and serve as centers of influence for better living. The amount of work that these institutions have been able to do in proportion to their field is small. They need a lot more money than I have offered them, and I hope that others will realize their importance and deal liberally with them. They have strong boards of trustees. This fact insures the wise expenditure of their money.

As to Rochester, the town in which I am interested above all others, we are all set now to develop our University on the broadest lines and make it one of the outstanding universities of the country. By that I do not mean one of the largest but one of the highest rank in all of the fields which it has entered. The citizens of Rochester have never shown any inclination to "lie down" on any great civic enterprise, or to "let others do it." This, I suppose, is one of the reasons that has actuated the General Education Board and other friends of the University outside of Rochester to aid in large undertakings for the University here. But for the fine response of our citizens in the recent University campaign I should certainly not have allotted to the University of Rochester so large a proportion of the properties which I am now distributing.

Rochester is well started on its way toward being the finest city in the world to live in and bring up families. As a place to earn and spend money, to maintain health, to obtain education and recreation, it stands unrivaled. All I can see that it needs now among the fundamentals is a civic center and a modern system of municipal government. Its present system is not up to date. For years we have enjoyed about the best administration which can be obtained under this system. The system is irredeemably handicapped because appointments to key positions have to be made for political considerations. It must be obvious, on this account if on no other, that the administration of city affairs cannot compare in efficiency with the administration of the great industrials in which appointments are made for merit only. One of these fundamental improvements which I have alluded to can probably be carried out without much if any cost to the taxpayers, and the other can be made the means of saving a great deal of money in carrying on the city's business.

The Past Month

THE trans-Atlantic radio transmission of photographs became an actuality on November 30 with the transmission from London to New York, under the auspices of the Radio Corporation of America, of a photograph of President Coolidge. Technology men have cause for great pride in the fact that Richard H. Ranger, '11, was the engineer responsible for the design

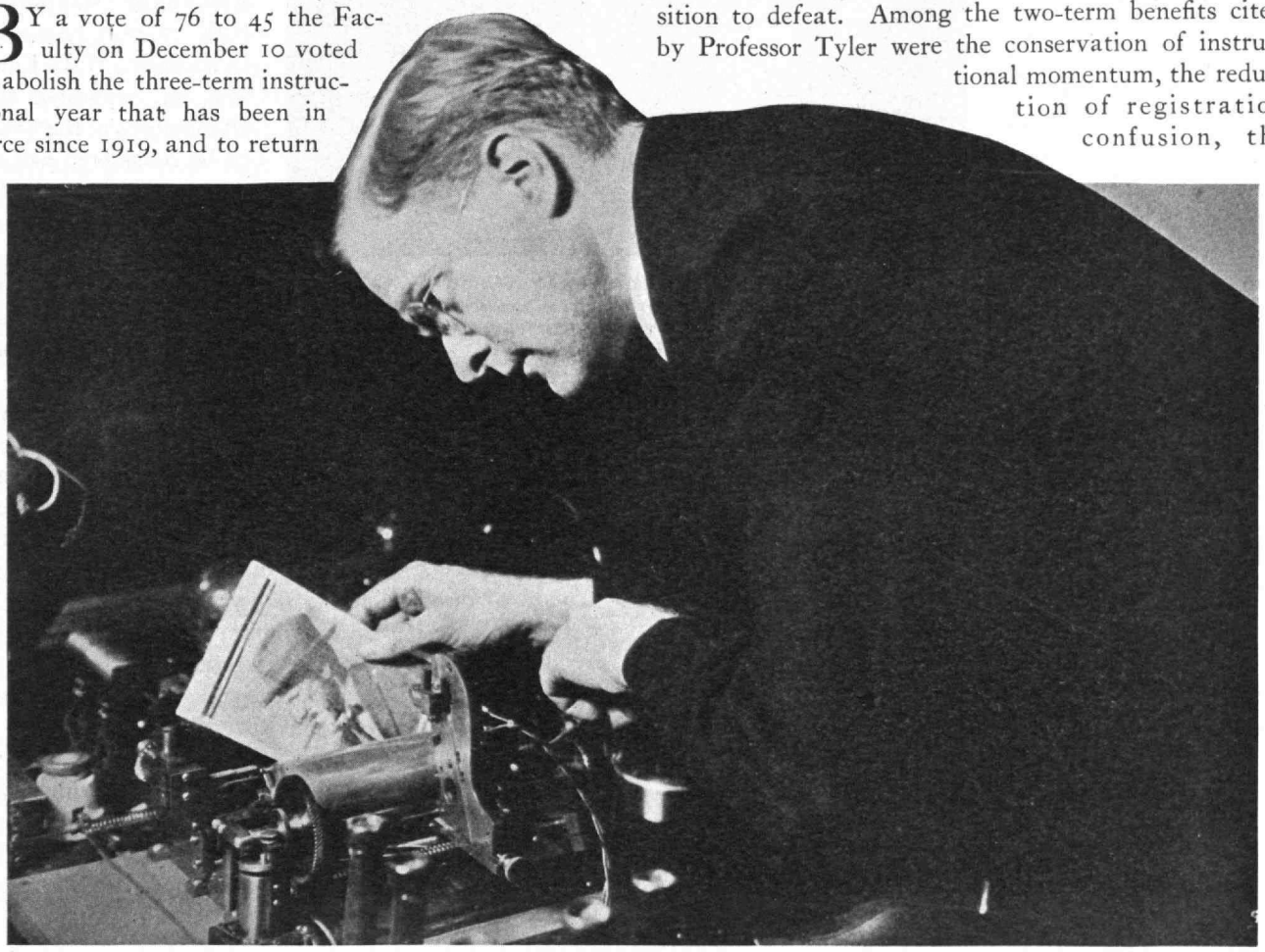
Times Wide World

COOLIDGE, CHERUBS, HUGHES

Three of the diverse photographs recently sent by radio from London to New York by the invention of the Technology man pictured below

and construction of the apparatus which wrought the seeming miracle. His constant work since February 1923 was rewarded in spectacular fashion. Captain Ranger is a graduate of the Institute's course in Physics and during his undergraduate career was General Manager of Volume XXX of The Tech.

BY a vote of 76 to 45 the Faculty on December 10 voted to abolish the three-term instructional year that has been in force since 1919, and to return to the semester basis. By all accounts debate was heated and lengthy, and the measure was eventually passed with a margin of four votes only over the three-fifths majority required. H. W. Tyler, '84, Walker Professor of Mathematics and Head of the Department, presented to the Faculty fourteen points in favor of the semester calendar, the cogency of which finally swept the opposition to defeat. Among the two-term benefits cited by Professor Tyler were the conservation of instructional momentum, the reduction of registration confusion, the

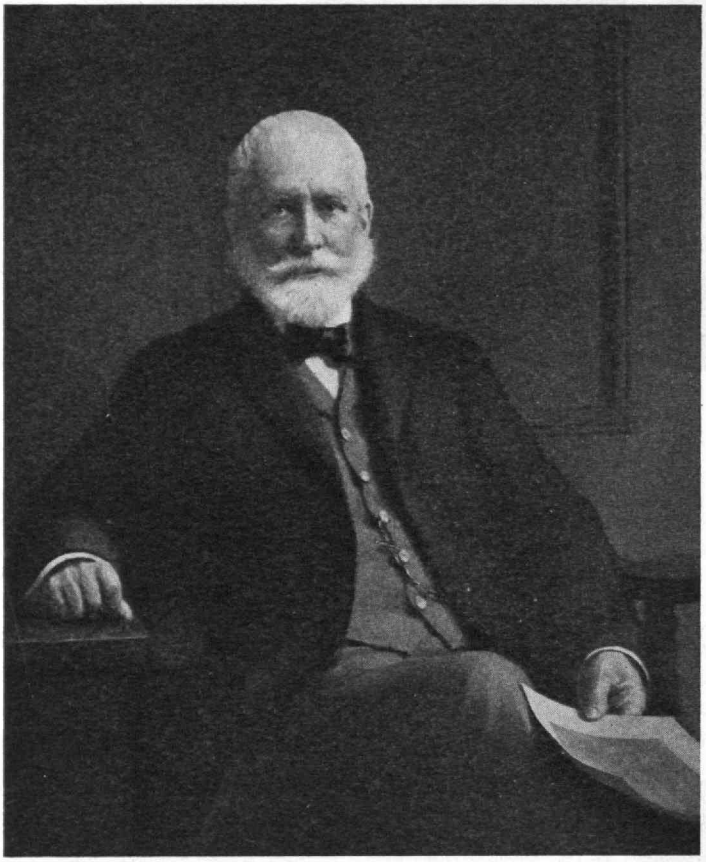


Times Wide World

RICHARD H. RANGER, '11

who succeeded in inventing the apparatus which broadcast photographs across the ocean. It cost him only about one-tenth the time which it took Samuel Finley Breese Morse to invent the telegraph.

compactness and symmetry of the year, the avoidance of excessive emphasis upon the round-up feature of examination periods, and the lessened labor and expense of maintaining records, reports and registration. The change will go into effect with the beginning of the school year 1925–26, with the result that the initial and terminal dates of the year will probably be September 26 and June 6, instead of October 1 and June 22 as, under the three-term arrangement, they would have been. The Registrar, J. C. MacKinnon, '13, has already begun the clerical work necessary to put the change into effect.



WILLIAM R. WARE
The portrait of the Founder of the Department of Architecture. The painter is Emil Pollak-Ottendorff. It was presented to the Department on December 5

PRESIDENT Stratton, whose sudden illness and operation was announced in The Review last month, has now left the Washington hospital in which he spent his enforced stay of three weeks, and is convalescent as these words are written. The exact date of return to his duties in Cambridge is, of course, still problematical. Dean H. P. Talbot, '85, is acting President of the Institute in the meanwhile. The news of Mr. Eastman's latest munificence was announced to him on his sickbed, and no doubt did much to accelerate his recovery.

PROFESSOR W. J. V. Osterhout, Professor of Botany at Harvard University, will deliver the third annual William Thompson Sedgwick Memorial Lecture in Huntington Hall on January 22. His subject will be "Some Fundamental Problems of Cellular Physiology." These lectures are delivered annually in memory of the late Head of the Department of Biology and Public Health of the Institute. They were established by his associates in the field of biology and public health. Dr. Osterhout, who gives the lecture this year, has recently been elected to a position at the Rockefeller Institute of Medical Research.

SO brief was the One Hundred Ninth Meeting of the Alumni Council (held in Walker Memorial on November 24) as scarcely to admit of the usual more extended record in The Review. The enforced and regretted absence of Kenneth Moller, '07, Chairman of the Five-Year Reunion Committee, who had planned to present to the Council a report of the progress of his Committee, contributed to the shortening of the evening. In Mr. Moller's absence, Orville B. Denison, '11, Secretary-Treasurer, imparted such information on the Reunion as lay in his power. At this meeting was begun the practice of receiving suggestions from Council members on names which the Nominating Committee might consider as possible Corporation candidates. The names of I. W. Litchfield, '85, J. O. DeWolf, '90, F. H. Fay, '93, J. F. McElwain, '97, A. W. Rowe, '01, Lawrence Allen and Alexander Macomber, both '07, were presented. In addition, M. L. Emerson, '04, suggested that all members of the Council be considered as Corporation timber, whether or not their names were specifically presented.

R. T. Haslam, '11, Professor of Chemical Engineering at the Institute, and Director of both the School of Chemical Engineering Practice and the Research Laboratory of Applied Chemistry, spoke briefly to the Council upon the subject of a new graduate course in Gas and Fuel Engineering which, next October, will commence under the auspices of the Department of Chemical Engineering. A definite scheme of instruction has not yet been worked out in detail, but the new course will, beyond doubt, be offered only to graduate students and will, in all probability, be made coöperative. Thus will the department attempt to cope with the growing body of scientific information upon this vital subject.

A showing of the motion picture film which Mr. Denison presented last year to the various local clubs within his visiting range, and which depicts various Institute scenes, personages and events, was unreeled for the Council by way of closing the evening.

FRIENDS of the Institute were grieved to learn of the sudden death of two former members of the Faculty within the short space of three days. On

Thanksgiving Day, George C. Whipple, '89, passed away at his home in Cambridge. The Sunday following, Theodore Hough, whose first connection with the Institute was as Instructor in Biology in 1893, died unexpectedly at his home in Charlottesville, Virginia.

Professor Whipple was one of the pioneers in the field of sanitation, and was a leader in his profession. Since 1904 he was a partner in the firm of Hazen and Whipple of New York City. In 1911 he became Professor of Sanitary Engineering at Harvard and served in the same capacity at Technology so long as the Gordon McKay agreement was in operation. In 1917 he was a deputy commissioner to Russia under the American Red Cross. Three years later the League of Red Cross Societies made him chief of its department of sanitation. In this capacity he spent considerable time in the study of typhus fever in Roumania. He was the author of many books and monographs, of which perhaps the best known is "The Microscopy of Drinking Water."

In a letter concerning Professor Whipple's untimely death received by The Review from George F. Swain, '77, Professor of Civil Engineering at Harvard University, he speaks as follows:

"The passing of Professor Whipple leaves a void that cannot at this moment be filled. He was one of our leading sanitary engineers; and his breadth of interest, covering Sanitary Engineering, Public Health and Municipal Administration, gave him a unique position. It is rare that a man has such breadth that he is a member of three faculties in Harvard University and beloved and successful in all . . . No words can do justice to the sorrow which his passing leaves in the hearts of those who knew him and loved him."

Professor Hough came to Technology in 1893 as Instructor in Biology directly from Johns Hopkins University where he had that year received his degree of Doctor of Philosophy. He became Assistant Professor in 1895 and remained at the Institute until 1903, when Simmons College called him to a similar chair. In 1907 he went to the University of Virginia as professor of Physiology and in 1916 became dean of the Medical School there. The Association of American Medical Colleges honored him with its presidency in 1922.

Announcement

The Review takes pleasure in informing its readers that beginning with its February issue there will become incorporated with it the present Bulletin of the Society of Technology Architects. Under the name of The Architectural Bulletin, it will appear as a regular section of The Review, in alternate months. The section will be under the editorship of Kenneth Reid, '18, a graduate of the Department of Architecture, whom our readers now know principally, perhaps, for the admirable series of cover designs which have decorated The Review for the past year and a half.

During the period of its present editorship, The Review has devoted considerable attention to the work of the Institute's graduates in Architecture. No body of Technology men have made contributions to American life and civilization more important and more enduring than have they. It has been The Review's privilege to do its small part towards furthering the spread of their work, and its pleasure to be able to stamp them publicly as Technology men.

In the past two years The Review has published articles and sketches by such men as Arnold Brunner, '79, Cass Gilbert, '80, Welles Bosworth, '89, John Mead Howells, '90, Joseph H. Freedlander, '91, Raymond M. Hood, '03, George C. Wales, '89, Edwin H. Blashfield, '69, Louis C. Rosenberg, '13, Harold C. Stearns, '16, John T. Cronin, '17 and Samuel Chamberlain, '18. The future inclusion of The Architectural Bulletin will not alter this previous policy. It will serve rather to reinforce it by the addition of a carefully systematized presentation of the news concerning the architectural achievements, large or small, of Technology men—by a department formally organized for the purpose. For the new department, we bespeak a cordial reception from all readers of The Review.

REASONABLY assiduous readers of the daily papers can not but have been struck by the prominence given to "ethyl gas" in their columns. The gas has come into ill repute largely because of fatalities in New Jersey oil plants where it was being used. Those opposed to the preparation claim that it will in time bring on chronic lead poisoning in those subjected to it, particularly in cities where congestion concentrates the exhaust gases.

Recent experiments carried on by Chaplin Tyler, S. M.,' 23, and D. P. Barnard, S. M., '21, research associates in the Research Laboratory of Applied Chemistry at Technology show that any ventilation which will remove the danger of carbon monoxide poisoning will handle the lead from the exhaust gases twenty times over. Accidents which have taken place in plants are due to unskilled operators, according to Barnard and Tyler.

By the use of lead tetraethyl it has been found possible to slow up the explosion in a gas motor. This allows an increased compression without knocking and a corresponding higher efficiency. Since much of the pioneer work on "ethyl gas" was carried on in the chemical laboratories of the Institute, it is pleasant to hear at this time that it is not necessarily baneful.

ANOTHER event still in the future will be history by the time this issue of The Review reaches its readers. Announcement has been made that the Alumni Dinner will be held in Walker Memorial on January 3. Little data as to the program to be provided is available at this time, but a recent

bulletin from H. P. Eddy, '17, Chairman of the Committee on Assemblies, announces that Samuel M. Vauclain, President of the Baldwin Locomotive Works, has been secured as the principal speaker of the evening. Mr. Vauclain has come to his high position through the ranks, having been superintendent of the works for many years before he became vice-president in 1911. In 1917 he was chairman of two separate commissions of the Council of National Defense and in 1919 he became president of the Baldwin Works.

THE Committee, formed of members of the Technology Women's Association and of the Alumni, has organized and is securing funds for a memorial, on this, the tenth Anniversary of the death of Mrs. Ellen H. Richards, '73. As announced in the November issue of The Review the memorial will probably take the form of a bronze bas-relief with a suitable inscription to be placed in one of the chemical laboratories. Everett Morss, '85, as Treasurer of the Committee, reports already the receipt of a small sum.

Editorial Comment

The Sixteenth Million

No more unexpected munificence ever came, perhaps, to an educational institution than came to Technology some few days ago through the latest and most dazing of all George Eastman's many generosities. The Institute was in the midst of no noisy drive for funds. It had conveyed to no one the fact that it was facing any manner of financial difficulty. Merely, it woke up on the morning of December 8 and found that overnight its capital funds of seventeen million dollars had increased almost thirty per cent. Small wonder that it rubbed its eyes.

The immediate editorial temptation is, of course, to draw up to the typewriter and in an easy hour to spend the four and a half millions. It is a temptation rigorously to be spurned. Friends at every turn are asking of Technology men, "Well! What are you going to do with all that money?", and the tendency to a glib answer is not easy to avoid. Yet avoided for the moment it must be.

Mr. Eastman's generosity places a grave responsibility upon all Technology. He himself has seen fit to comment upon the extreme difficulties of the wise disposal of wealth. The absolute unrestriction of purpose for which the new funds may be used in many ways complicates the task of those financial officers who must see to it that the new ingredient is mixed into the financial batter so that it may remain smooth and lumpless. If the donor had said So much for buildings, So much for chemical research, So much to establish courses in a new technology, and so on, one major problem, for better or (more probably) for ill, would have been solved.

But he said nothing of the kind. In fact, he said little more than "Here you are." He made his bestowal because of an interest in seeing wealth used wisely and a belief in the Institute as being capable of so using it. A heavy burden of proof thus rests with us.

Yet for all the necessity of guarded speech at the moment, the Alumni are interested, and rightly so, in knowing the fashion in which Technology's rare good fortune is to alter its future course. Here, they stand in the company of Mr. Eastman, who selected the Institute for his benefaction for the very reason that, in his belief, "it is all prepared to begin to make use of these additional funds." "I would like," he says in another place, "to see results from this money within the natural term of my remaining years."

No one can read that line without saying forcibly, if to himself, "He shall." If the officers of the Institute are at the moment laconic, it is most certainly not because they need to be convinced of the desirability of unlagging action.

It is hard to begin the expenditure of four and one-half million dollars, but it is doubly and desperately hard to stop. Few plans for expansion, at the Institute or elsewhere, have been conceived that did not soon run into double the putative sum, and need, thereupon, extensive revision before they could been seen through to a sane completion. The financiers of the Institute must thus certainly be heeded if they beg to be excused from questions at the moment. It is apparently their determination that this time, the new endowment be not considered as an inexhaustible source of wealth, a horn of plenty for the enthusiast who would remake Technology over-night.

The Institute is not now on Easy Street, nor would it be were Mr. Eastman to double or quadruple his generosity. The expenditure of every new dollar opens a dozen new paths for the dollar that follows.

Notwithstanding these cautions, the Institute may look forward in the middle distance, to a future of definite, if gentle, expansion. The existing buildings are cramped in many quarters, and offer two or three logical opportunities for new construction. Every department is in need of additional facilities for teaching or for special research. The salary scale is definitely too low, and could well be the first item of consideration. The Institute has suffered some heavy losses through recent Faculty resignations, and can now welcome the opportunity of making itself more attractive to men of a calibre to replace those it has lost.

It is a happy prospect which we face. Few people realize, perhaps, that before Mr. Eastman this latest time hurled himself into the breach, the Institute seemed to be facing a situation of some financial discomfort. The sudden alteration in this situation, plus the alluring prospect of being shortly able to plan for even better things, produces a gratitude for the man whose generosity made it possible that goes far too deep for effusion.

The Care of Student Health

How Technology's Department of Hygiene is watching over the Physical Well-Being of the Undergraduate

By Allan W. Rowe, '01
Director of Research, Evans Memorial Hospital

The past few decades have witnessed an astounding growth and development of institutions of higher learning. Curricula have taken on peculiar forms which may well have caused conservative founders more than one uneasy turn in an erstwhile peaceful grave. The daily press contributes ever more surprising announcements of courses added to the bulletins of conservative universities. Studies of hotel management of radio broadcasting, of household economics and of cheer leading are now well ensconced in many distinguished colleges. The most recent addition is a course in Cross Word Puzzles. Time is on the wing. Where the end may be no one can safely predict.

Rapid as may be these metamorphoses, pathological as they may seem to some, they are by no means so significant a development as their bizarre blazonry would lead one to suppose. The cult of the New will ever attract many to its fold. The color of the appeal of these curricular changes has served to render somewhat inconspicuous in contrast a development more serious, more far-reaching, more significant. This important change attracts but little attention in the daily journals—it occasions no irate or laudatory communications from choleric or beaming Alumni. None the less it reaches to the very roots of our educational system and there acts as a distinct aid to the growth of the sturdy tree. The development is that of increasing attention to the physical well-being of young men pursuing an education. To understand and appreciate the significance of this it is necessary to consider briefly the systems of education which have been in vogue in our country until very recently.

There are, of course, looking at the matter from a detailed point of view, nearly as many systems as there are colleges extant. In the main, however, all of our collegiate theories are based on one of two systems both originating in Europe—which may be severally called the Continental and the English systems.

The Continental system is best illustrated by the educational organization in Germany. Its roots lie in mediævalism. Its prototypes were akin to the early universities of Bologna, Padua and Paris. The early college of this type was an association of scholars banded together for protection and mutual education. These scholars gradually formed faculties, the faculties gained recognition for their merits and attracted other scholars. When the recognition became general, the state took an interest in the group and aided its previously precarious financing. Today the Continental University provides a complex teaching faculty with an equipment mentally and physically capable of providing instruction in almost any recognized branch of art or science. The education is conducted largely by lectures and classroom exercises. The group may vary in size but it is always the group. Individual instruction is rare. The university is supported by general taxation and is therefore under government control. With the provision of all conceivable means of instruction the province of the university ceases. The student passes through the formality of a matriculation and thereafter conducts his life largely as he sees fit. Ultimately he again approaches his university in a formal manner and subjects himself to academic tests of knowledge prepared by the faculties. With successful passing of these examinations he receives his degree and his connection with the institution ends as easily as it began.

The English system, on the other hand, is concerned fully as much with social as with academic relationships. The system may justly be called paternalistic. The institutions under this system, of which Oxford and Cambridge are notable examples, were originated by wealthy or influential individuals who created common abodes for groups of young men desirous of obtaining knowledge. They continue to operate under the same system. Education in these groups was more personal, and individual instruction persists today in the tutorial system. The students are housed and fed by the

Above
J. ARNOLD ROCKWELL, '96, M.D.
who was the second "Physician to the Institute"

Below
GEORGE W. MORSE, M.D., F.A.C.S.
the present Head of the Department of Hygiene, and Medical Director who, with a corps of assistants, deals with the health problems of Technology students, Faculty and employees

Faculty and the employees of the Institute and, second, to provide adequate care for the sick and injured. To explain how this is done it will be necessary to go into some detail concerning various phases of the work.

Every man entering Technology is required to have a complete physical examination based on the standards of the United States Army. This means that every Freshman and every student entering with advanced standing has a complete evaluation of his general physical equipment. One out of every five of the men examined has something wrong with him. Very often it is found that the trouble is one that has become deep-seated through neglect in earlier days. It is therefore the ambition of the Institute, by coöperation with the health departments of preparatory schools, to follow up, where possible, treatment started in infancy, rather than be forced to correct a serious defect at what may be too late a time. Of the twenty per cent of the men who have defects, a large proportion are found to have something wrong with their tonsils, their teeth, or their posture.

The treatment of the first two foci of disorder is fairly obvious. Posture defects are also, in general, correctible to a large measure. Where there does exist this possibility the student is given a course of corrective gymnastics designed to meet his particular needs. An innovation introduced last year is the use of silhouette photographs to provide objective findings in the group showing postural defects. These photographs show the defects very clearly and are of great assistance in correcting them. The pictures are shown to the students and the ill effects which follow such a posture are pointed out and explained to them; finally remedial exercises are prescribed to overcome the faults. Each man in the corrective group receives individual attention. The benefits accruing to the group are strikingly illustrated in the serial pictures of individual cases accompanying this article.

But even if the machine with which the student starts his career at Technology is in good condition, he is not allowed to let it rust on his hands. All Freshmen are required to partake in controlled exercise. By action of the Faculty, certain approved forms of athletic competition may be substituted. It has been the uniform policy of the Department to encourage men to take the elective rather than the required forms. To be sure, this encouragement is not greatly needed. Men shy at "monkey drill" as a timid horse does at a fleeting ribbon. Every year Dr. Morse receives letters from fond parents gravely informing him that their son Egbert is too weak to take physical training. Dr. Morse's uniform reply is that if so the child had best give up the scholastic work at the Institute altogether and take nothing but physical training. Yet at the end of the same year Dr. Morse may receive another letter saying that the parent did not know Egbert when he came home and that he had changed his name to Bill.

As a result of this liberal attitude toward substitution, during the past year 55 per cent of the Freshmen class elected athletic teams. The 45 per cent who remained in the required gymnastic exercises was somewhat larger than it might otherwise have been because of the inclusion of men barred from competition due to athletic ineligibility.

Suppose a man to be of decent physical equipment when he enters the Institute and assume that he does his required first year work conscientiously. This is, of course, no guarantee that he will continue to be a healthy man till the end of his college career. Pitfalls beset him at every turn and the greatest of these are the quick lunch counter and the unused bed. Men fresh from home cooking come to Technology with limited purse and a complete ignorance of how to order a decent meal. The lack of imagination of many resolves itself into three periodic journeys per day to one of the whited tiled sepulchres of Epicurus and the ordering of frankforts and beans and apple pie à la mode for each and every meal be it breakfast, tea, luncheon or supper. No system can long stand the strain. A special class has therefore been organized to demonstrate what can be done by dietary means to brings students up to a higher physical standard.

This class has been called a nutrition class in the past. The name is misleading for it far transcends the ordinary duties or purposes of the nutrition expert. It might much better be called a metabolism clinic. The chief pathological condition it observes and attempts to remedy is the one common to many students, underweight. The causes of this condition are social as well as medical. The study, therefore, is conducted from both points of view.

The work is under the charge of Dr. W. R. P. Emerson to whom the Institute is much indebted both for the general scheme of procedure and for the personal attention which he devotes to the conduct of the class. Dr. Emerson has been doing similar work all over the country but so far as is known Technology is the only institution of collegiate grade in the world in which this sort of clinic is operated.

Any student who is underweight and physically unfit and who will abide by the rules of the clinic is eligible to register in it. The interest of the men is excellent as is manifested by their good attendance upon an extra class held out of hours. Each man is subjected to a physical re-examination as well as a mental one. The mental examination (which might rather be called an examination of habits) seeks to find what his schedule of work is; how much he rests; where, when and what he eats; his family history; and any other influences that might affect his condition. Knowing these, the clinic is ready to start work. The student is expected to gain if he lives up to the prescriptions made. His weight is plotted on a chronological graph at each exercise. The slope should be upward. If there is any downward movement the reason is ferreted out. Two sleepless nights, a slight touch of grip, a Junior Prom, all may cause a decline in the weight curve. Christmas vacations, when the men try to squeeze 25 hours concentrated enjoyment into every 24 hours elapsed time almost invariably cause the curve at best to remain a straight line over the period. Gradually the causes of poor condition are eliminated by class discussion of them when the individual's chart indicates their occurrence. The number of men who have been brought up to or above normal weight is surprising.

Many men, of course, will never elect such courses. Many entering Freshmen have never been Boy Scouts and know nothing of first aid. An appalling number have no proper conception of the problems of life in urban communities. To fill these lacks in brief fashion three lectures are given at the beginning of the year on Personal Hygiene, and First Aid. Special stress is laid on instructing students how to live, what to eat, in short, how to preserve their health. The extension of this feature is one of the many plans for future development.

So far the stress of this article has been laid on methods not purely medical. Technology, of course, provides also full care for the sick. Since this feature of the social service is not unique to Technology it will not be dwelt upon at great length. The Department operated two clinics daily for ambulatory cases. This service offers help to the sick student, either aborting or minimizing an incipient illness or recognizing a serious condition and preventing injury from neglect. When any serious illness is discovered the student's parents are immediately notified and every effort is made to carry out their requests. The parents are kept advised by a daily telegram of the patient's condition.

The confidence of the student body in the clinic is best exemplified by the extent to which they use it. During the past year a total of 11,906 visits were made to the clinic — an average of practically four per capita. The busiest months were April and May.

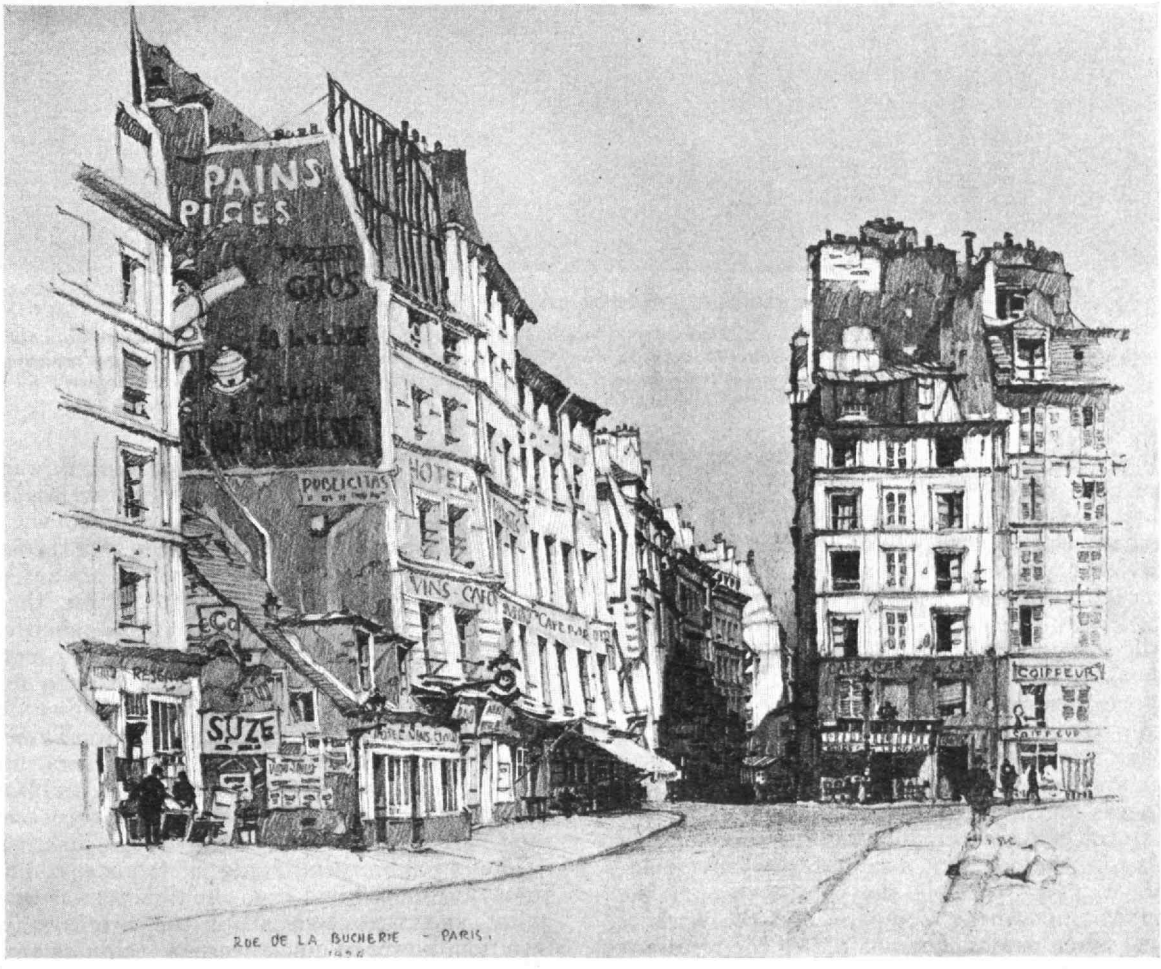
Experience has shown that many students require treatment for which they are unable to pay. To meet this contingency the authorities of the Institute have placed in the hands of the Department a generous fund to be expended for this purpose. No student in Technology need ever lack for adequate medical assistance. Alumni may well feel proud of this generous policy.

As may well be seen in the foregoing, the essence of the whole system is prevention. To recognize and treat disease is a duty and a prime obligation in our present state of development. To prevent it, however, or at the worst to circumscribe and curtail, is the higher goal and the one toward which every effort is being made. One measure of present success may be found in the fact that whereas in 1922–23 the student body lost 2306 days from sickness, in the year just ended but 1001 days were sacrificed. To continue this work of prevention is the earnest desire of the Department. One plan which is now taking form can best be presented in the words of Dr. Morse.

"A physical examination of every man should be made each year, or even better every six months. The weak link in our present method is the fact that after a man has his first physical examination on entrance to the Institute, no further examinations are compulsory during the ensuing four years. Many serious diseases may develop in that length of time, and under the present arrangement no real provision is made for this contingency. Beginning with the class of 1925 it is compulsory that all Seniors, as well as men entering the Institute, be examined. In this way we can acquire statistics to show the effect of four years' intensive study on the average student.

That the Institute has assumed a duty towards its students outside of classroom service is evident from the facts here presented. Other similar obligations are being undertaken and met in generous manner.

In its care of the health of the undergraduate body it offers a golden service both to the individual and to the community at large. Much has already been done. It is certain that the tale of years will bring increase.

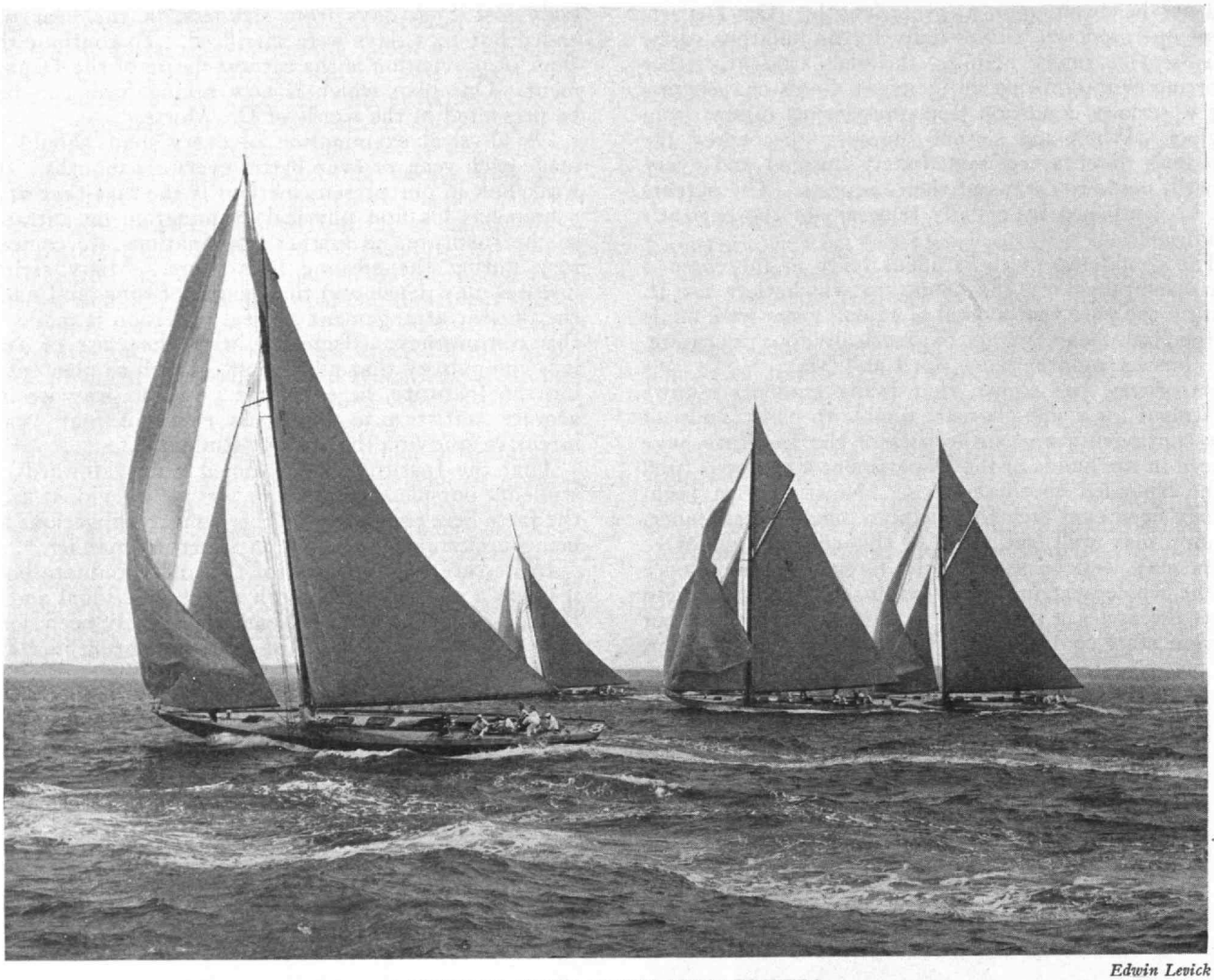


A LITHOGRAPH OF OLD PARIS

One of a series of facile and sympathetic sketches from the versatile pen of Samuel Chamberlain, '18

The Genius of Sail and Steam

Who was Nathaniel Greene Herreshoff, too little known as a Technology Man



Edwin Levick

A STIRRING START OF THE FIFTY-FOOTERS

These yachts were built by the Herreshoffs in 1913. Their 50-foot length on load waterline made them the largest ever produced in one design quantity. These boats, although racers in every sense of the word, are of sturdy construction and wholesome cruising accommodations. They represented a decided forward step in combined racing and cruising-yacht architecture

By Robert E. Rogers
Associate Professor of English

It is probable that Technology men know more about Sir Thomas Lipton than they do about Nathaniel Herreshoff, the man to whom, as designer of the defending yachts, must go the major credit for keeping the America Cup in America. Yet for all their ignorance, Nathaniel Greene Herreshoff is a Technology man of the early class of '70, and it was at the new school that he laid the foundation for his striking career as engineer and naval architect.

Attention has recently been focused upon the Herreshoff Shipyards at Bristol, R. I., by the public announcement that they were to be closed and sold at auction, and there was much regretful talk of the passing of a great tradition in American ship design. Fortunately still another Technology man, a capitalist of Providence, intervened to make possible the continuance of the Herreshoff Manufacturing Company and the work of Nat, its designing genius, but not before the resultant clamor had unearthed more than one interesting yarn of the Herreshoff family.

Like the famous Edwards and Quincy Adams families, the Herreshoff inheritance was one of distinct and unusual power. The first of the name was a Charles Edward who came from Germany in 1790 and married a daughter of John Brown, the Bristol shipbuilder; the sons and grandsons inherited from the father music and languages, from the mother the love of the sea and the craft that was to make the name famous. They also inherited blindness, for four out of nine grandchildren were blind. These grandchildren were notable chemists, engineers, musicians and linguists, and two of them, John B. and Nathaniel, became the heads of the famous shipyards that bore their name.

The two brothers made a famous combination. John B., totally blind from the time he was fifteen, the ablest and the cleverest of the brothers, had the intuition, power of quick decision, boldness and practical sense that makes for great success in business. Stoutly built, with chest and arms "like a gorilla,"

strong, quick and dominating, a "go-getter" in business, a man of snap judgments based on rapid mental calculation, of tireless energy, creative inventiveness, pioneering eagerness in his profession of shipbuilding. He was the dynamo of the business and when he died in 1915 it seemed impossible to replace him.

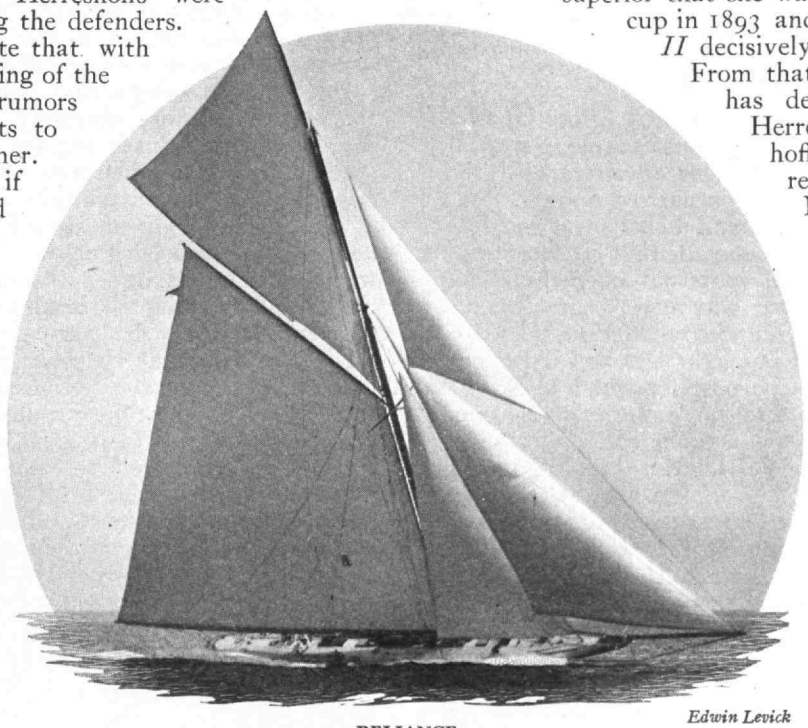
Nat (named Nathaniel Greene after his famous ancestor of the Revolutionary War) was the engineer of the combination, the scientist and artist who designed, developed and perfected, subject to J. B.'s unerring business judgment. If Nat made three models for a possible cup defender, it was the blind man who ran his marvelous fingers over the models and decided which one should be built. In Nat one felt the artist as much as the engineer. Tall, slender, stooping, silent, temperamental. A slow and solitary worker, a secretive, experimental genius, with unusual powers in applied mathematics, he made his models with his own hands in the secluded third story workshop of his home and then from these models, using an ingenious mechanism of his own design, he took off their lines. He never wrote or published, he carried much of what he knew in his head, many of his secrets by which he developed what were perhaps the best ships of their kinds in the world will die with him. He, too, was a pioneer in design as his brother was in business enterprise. Together the combination was unbeatable. Sir Thomas Lipton, after trying with four *Shamrocks*, each time defeated, said that he would never again challenge while the Herreshoffs were designing and building the defenders. It is interesting to note that with the rumors of the passing of the old yard we hear also rumors that Sir Thomas wants to try again next summer. It would be ironic if another than Nat should design the next cup defender . . . and if Sir Thomas should lift the cup at last. Ironic and not unfitting. Nat always wished for a chance to design a cup challenger, which would have to cross the Atlantic under her own sail, but the chance never came. He built too well ever to lose.

It was John B. who started the modest shipbuilding plant in 1863 and ran it single handed until 1878, when Nathaniel joined him in an association which was to last until 1915. Meanwhile, Nat had gone to Technology, specializing in mathematics and mechanical engineering (there was no course in naval architecture in those days), and then to the George Corliss steam engine plant in Providence. When he joined his brother he immediately set his mathematical genius to the problems of marine engineering, in which the plant had begun to make a reputation, and designed his coil boiler combining great power, quickly generated, with lightness, which gave the Herreshoff steam yachts a superiority which was never challenged. Some of the most famous steam yachts of the day, the *Now Then*, the *Say When* and the *Stiletto*, which literally raced in circles round a Hudson River steamboat, were designed by Nat and approved and built by John B. The United States government was attracted and the brothers built the first American torpedo boats. Then they built them for Great Britain and Russia, and for South America a special type that had to be built and shipped in sections. That was a new and difficult job and it is recorded that John B. considered as long as twenty minutes before accepting the job and naming the price. Their steam yachts and racing yachts were standards in the world of ocean sport.

But in the early nineties began the work which more than any other was to immortalize the name. After seven attempts in forty years since in 1851, the yacht *America* had won the Queen's cup at the Isle of Wight. Word came that Lord Dunraven was to send another challenger, the *Valkyrie II*. Nat had just designed a new 46-foot sloop embodying principles now familiar but then revolutionary—the long overhang stern and the forefoot cut away almost in a straight line from stem-head to keel. It was so successful that the designer was invited to be one of four to submit competitive designs for the new defender. The Herreshoff boat, the *Vigilant*, proved in the trial races so far the superior that she was chosen to defend the cup in 1893 and defeated the *Valkyrie II* decisively.

From that day every yacht that has defended the cup was Herreshoff designed, Herreshoff built, and, once, Herreshoff skippered — for Nat was one of the finest yacht sailors in the country. In 1895 Lord Dunraven made his last attempt and matched the *Valkyrie III* unsuccessfully against the *Defender*.

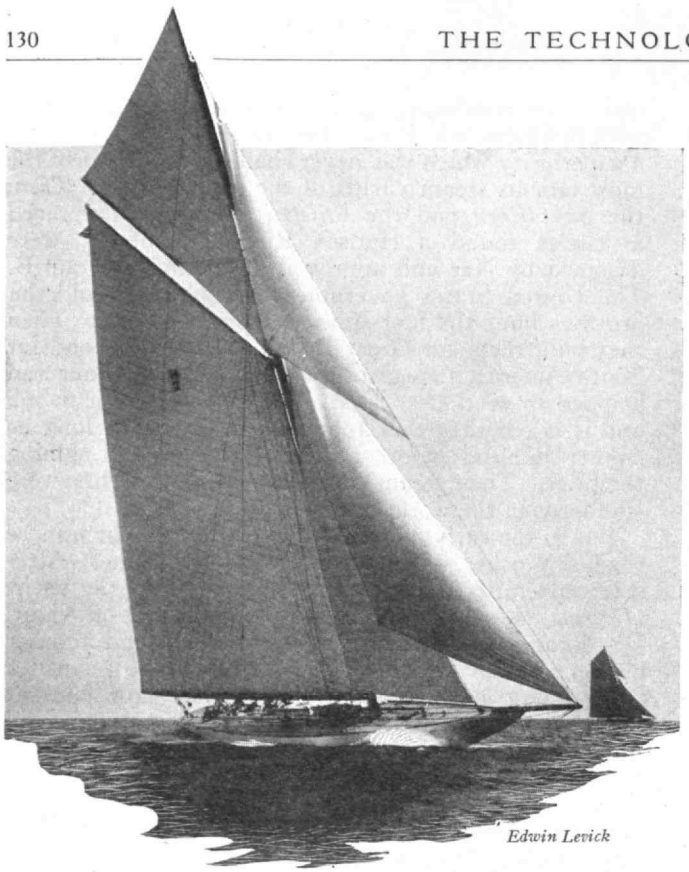
Then Sir Thomas Lipton, the tea baron and crony of the then Prince of Wales, tried his luck with four successive *Shamrocks*. In 1899 the *Columbia* beat the first *Shamrock*. In 1901 Nat evolved the *Constitution* to match *Shamrock II* but in the trials it was decided that the old *Columbia* was still superior, and the *Columbia* defended the cup. In 1903 *Shamrock III* was defeated by the *Reliance*, perhaps the greatest boat the Herreshoffs ever built. She was narrower and deeper than the *Vigilant*, with manganese bottom and aluminum top plates, built with utmost economy of materials and with a sail area "that could catch a whisper on shore." It would seem that Sir Thomas got discouraged, or maybe the tea business needed



Edwin Levick

RELIANCE

The most perfect example of sailing yacht engineering ever produced. Built in 1903 and successfully defended the America Cup in that season



RESOLUTE

Built in 1914 as a candidate for America Cup defence and successfully defender of the America Cup in 1920. Although smaller and less extreme in racing type than Reliance, yet Resolute combined many of the remarkable engineering features of her earlier sister

attention, for seventeen years elapsed before he tried again. And once more the Herreshoffs came to scratch, this time with the *Resolute*, against *Shamrock IV*. The cup was saved, this time by a narrow margin. And once more Nat's chance to build a challenger was lost.

The complaint is sometimes made that the Herreshoff defenders took all the real sport out of yacht racing by developing a yacht that was merely a racing machine, so extreme in design and construction, that they were useless in anything but light airs and indeed for anything but the special purpose for which they were designed. From such criticism doubtless developed the Gloucester fishermen's races in recent years, for which syndicates promptly began building racers disguised as fishermen. But if the highest efficiency is to be found in the most perfect adaptation of means to end, there is no doubt that the Herreshoff racers were in both speed and beauty, the greatest single contribution ever made to the development of the sailing yacht. And to a great extent the same can be said of the shapely, powerful fast modern steam yacht and of war ships of the general type of torpedo boats and destroyers. The Herreshoff boat was the Thoroughbred of the sea.

It is true that the famous plant is not, after all, to be closed. It was not sold at auction, it is reported, but reorganized by a syndicate of Rhode Island men, headed by another Technology man, Rudolph F. Haffenreffer, '95. Many of the old stockholders are still interested and the old former superintendent of the yards will continue in his present capacity. The yard will continue to build yachts, with Nat as consulting Naval Architect. But for the first time since John B. founded the firm, yachts will also be built from plans by outside designers, a thing which was never allowed in the heyday of the firm. But Nat is now seventy-six years old, spending his winters at his favorite sport of yachting at Miami, Florida, and it is probable that the Herreshoff era inAmerican ship design is virtually over.

In a recent article in the *New York Times*, James C. Young apparently succeeded in getting Nat to talk, no mean feat, as he had a reputation of not suffering reporters gladly and being secretive and taciturn to the point of eccentricity. But Mr. Young got him to talking on the decay of the yacht building business in past years, the reason, apparently, for the Captain's decision to close up the business.

"'No, there isn't much demand for yachts any more,' he said. 'Costs are too high, for one thing. And people are too busy for such pleasure. Haven't the time to learn how a sail is unfurled, some of them say. The motor boat is an easy substitute and the automobile still easier. Both of them move fast and everybody is in a hurry to get somewhere today, even when they ride for pleasure. I do not suppose we shall ever again have the sort of yachts we used to build.'

"'Does that mean the craft is declining; that we shall lose the art?'

"Throughout a long career Mr. Herreshoff has been known as a taciturn man, reserved to the point of silence. He has always disclaimed honors. And he particularly dislikes to be 'written up for the papers.' His answer was somewhat slow.

"'If there is no demand for yachts the craft will not improve,' he said. 'But we have lost none of our skill as yet in the designing department. Structural work is more difficult, because there are not many workmen who will put into their tasks the love and effort necessary for boat building. It seems to me that this is the age of the motor and high speed. How many men who could own a yacht would be able to sail one; or take the interest to learn?'

"He waved a hand toward the harbor, and left unsaid the obvious things. There was the blue water, glistening under the warm sun, while idle clouds floated along overhead, some of them no bigger than the sail of a catboat just turning a headland. Mr. Herreshoff looked at the boat for some time. What was there to say in the presence of this glory, when one thought of a sail bellied in the breeze and the slap of canvas as a boom swings around.

"But Mr. Herreshoff thought that small boats were more popular than ever. 'Every bay is full now,' he said, 'and I am happy to see the youngsters learning to sail. Perhaps some of them will carry on the honors we have won with our yachts. Why, there never were such boats in the world as we built in America. The fastest afloat, and the prettiest, too. We have proved that our yachts can outrun the best built abroad. It is a great sport, but . . . nobody seems to want yachts nowadays.'

"Again his glance turned to the silent yard, the buildings falling into disuse, the crumbling docks, the ghostly forms along the shore. Then his mind reverted to happier times when the yard worked double forces to keep pace with the demand of those who would go to sea in a Herreshoff boat."

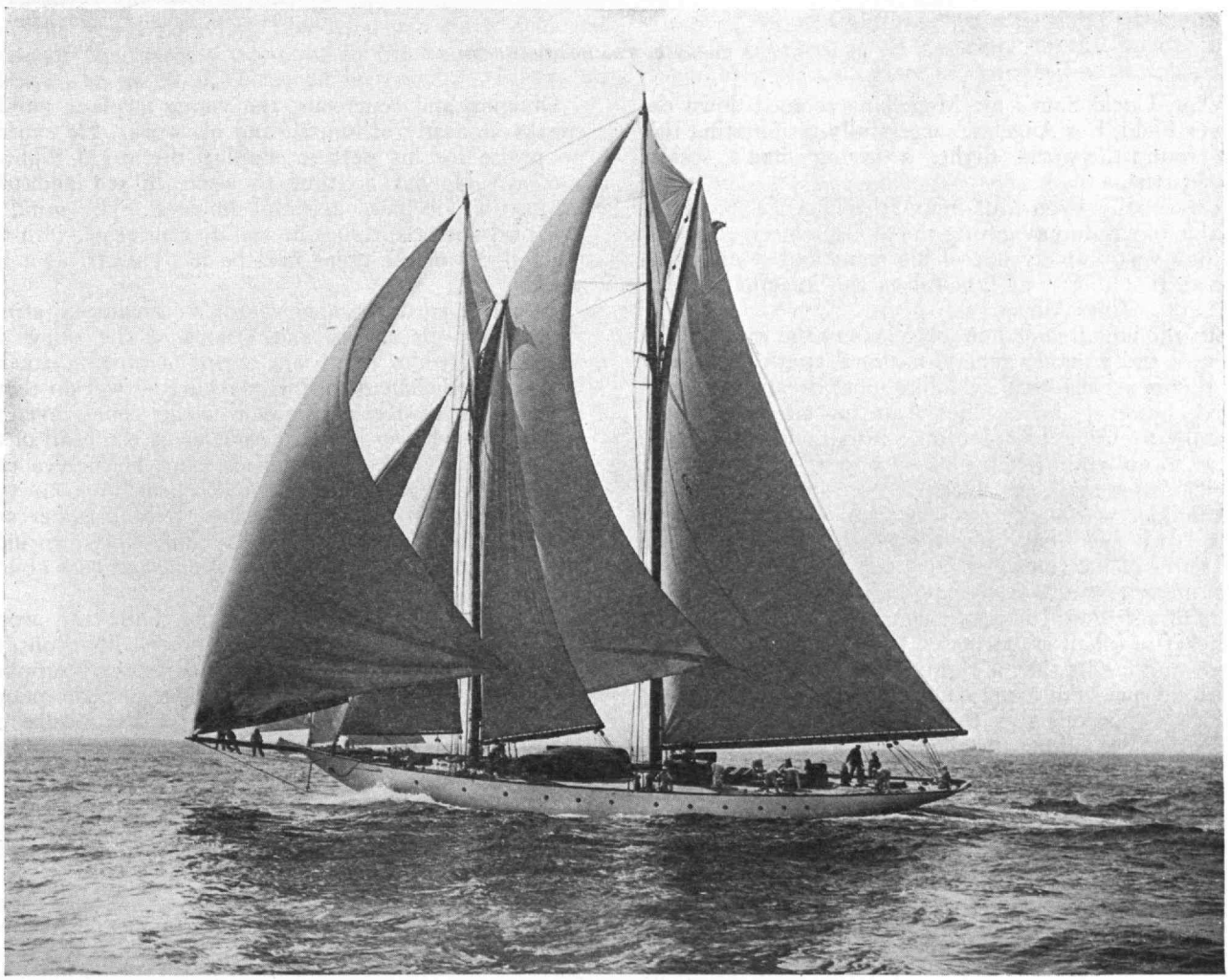
Perhaps the best valedictory was printed as an editorial in the *New York Times*, written surely by an amateur of the sport as a labor of love, which says in a paragraph or two, the essence of the long and splendid story.

"The announcement that the Herreshoff boat-building plant at Bristol, R. I., is to be sold stirs memories of

America's Cup defenders heeled over in white-capped seas or gliding like phantoms in the lightest of airs. The genius of Nat Herreshoff was equal to any problem in designing. The brothers, John B. and Nathaniel G., were magicians. From their brains and hands flowed creations incomparable, the *Vigilant*, *Defender*, *Columbia*, *Constitution*, *Reliance* and *Resolute*. John B. was blind at the time of their greatest triumphs, but his sense of touch on a model was almost as sure as the sight of Nathaniel. Faith in the Herreshoffs never faltered. It did not matter how dangerous the challenger looked, the yard at Bristol would find a match for her. Going to an international yacht race down by Scotland Light was an experience that held no fear of a misspent day. The defender did not always finish first, but the series would be safe. It was a fascinating sport. Postponements never dulled the edge of enthusiasm. One year there had to be eight excursions down the bay before the last race was sailed in a twenty-knot breeze, with clouds scudding in the sky as if running for the mark against the yachts.

"In the closing years of the last century and the first of this there was much published about the wonderful Herreshoff family of the 'quaint old town of Bristol.' It was a favorite subject with the newspapers. Interest centred on John B. and Nathaniel G., although the head of the family, Charles Frederick, left seven sons. All of them won distinction in various fields. Greatly pictured were the Herreshoffs, in groups and singly. The ramshackle house in which some of them were born on Papoose Squaw Neck looked out from its sycamores. Hidden away in the elms of Bristol, 'an old and sleepy town,' you came suddenly upon the boat-building yard. Nothing could be got out of Nathaniel. He was silence incarnate. But the more mystery, the more romance.

"The winding up of the Herreshoff plant is said to be due to the falling off of orders for such high-class work as it excelled in. A dull period has come in America's cup racing. For years Nathaniel dreamed of designing a challenger if the cup were lifted, but he could do nothing but produce invincible defenders. He was too modest to disdain the skill of the British. They, however, always regarded him as a wizard. The tendency today is to standardize boat building, sail and power. The glory of the Herreshoffs will endure, but their opportunities for new triumphs are too few now. Among yachtsmen and lovers of racing models and the sport of sailing boats there will be regret at their passing."



Edwin Levick

OHONKARA

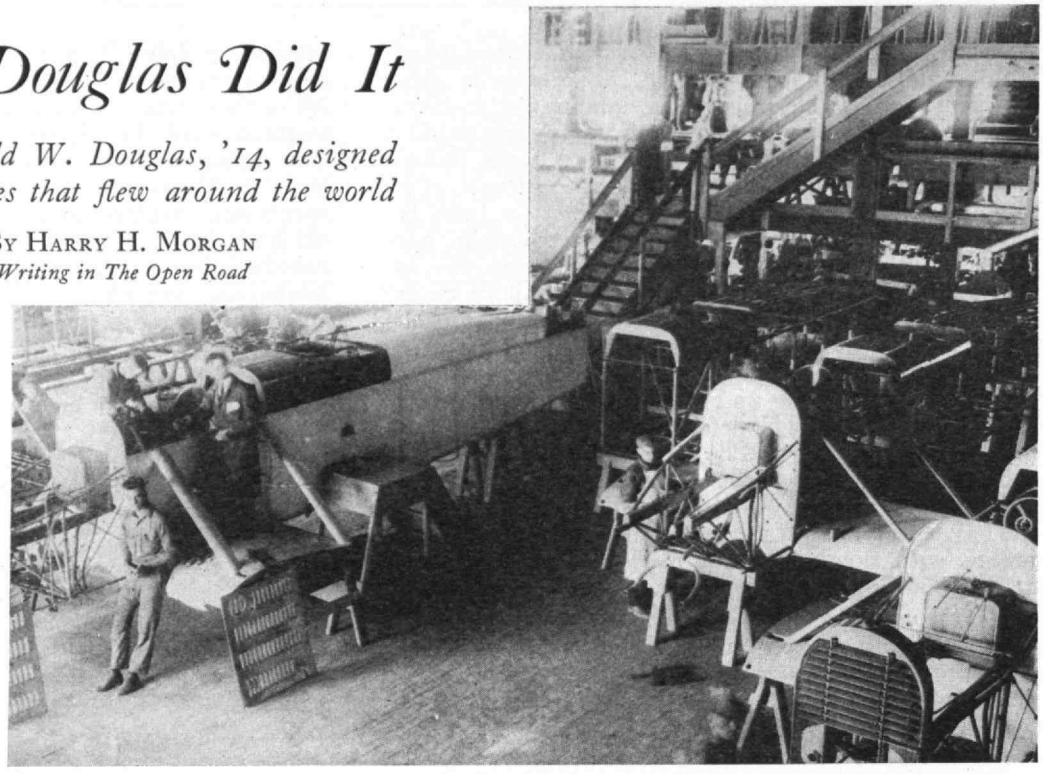
One of the Herreshoff schooners. Built in 1920

The Douglas Did It

How Donald W. Douglas, '14, designed the airplanes that flew around the world

By Harry H. Morgan
Writing in The Open Road

This article is reprinted by permission of The Open Road Magazine, where it appeared originally as one of a series of noteworthy achievements of the younger generation.
The Review is glad to acknowledge the courtesy of the Editors of The Open Road.



A Corner in The Douglas Shops

When Uncle Sam's air Magellans zoomed down on Clover Field, Los Angeles, successfully terminating the first round-the-world flight, a young man's vision proved true.

It was really a youthful dream, this idea of a steel bird capable of circumnavigating the globe, conceived when the boy was scarcely out of his teens and — as many said at the time — as fanciful as the imaginative exploits of a Jules Verne.

But the boy dreamed on, oblivious to the wails of the skeptics and a rather general national apathy concerning things aeronautical. Unlike most dreamers of the world, however, he did not wait for an omnipotent Aladdin to bring his phantasy into reality. He set about to do it himself by his own means and devices.

This "dreamer" was Donald W. Douglas, designer and builder of the sky cruisers with which the American Army flyers have just inscribed their prowess on the scroll of international fame.

In many respects this young man — only thirty-two years of age — still impresses one as being just a boy. A flicker of a half-embarrassed smile at mention of the honor and credit that is rightly his, the modesty with which he speaks of his remarkable achievements in the realm of aviation, give that impression.

He was lost among the thousands who swarmed and pushed their way over the landing field to shout and wave their joyous welcome to Lieutenants Lowell Smith, Eric Nelson, Leigh Wade and their companions, when they glided safely down on the spot from which the flight started on the foggy morning of March 17. Unrecognized and perhaps unknown to the throng of hero-worshippers, Donald Douglas probably added his voice to the resounding salute of cheers that greeted the returning aviators — if the emotion that welled in his throat at the sight of his dream come true permitted an utterance.

And now, his praise unsung, Douglas is back in his airplane plant at Santa Monica, California, with his blue prints, his designs — and his dreams.

Obliging and courteous, the young airplane builder speaks modestly of himself and his work. He expects no praise for his part in making the world flight a success. He has no time to waste in self-laudatory meditation on past accomplishments. His mind is occupied with the things he will do tomorrow, with the possibilities of the great field he has entered as a life work.

In this regard Douglas is still a "dreamer," still a youth with air castles and visions of the things he would like to do. And if a record of putting dreams into accomplishment means anything he will do them. For back of the dreamer element in this young inventor is the man who, in his early thirties, is the head of an organization of skilled engineers and mechanics employing from one hundred and twenty-five to two hundred men. In this composite of the dreamer and the man, one finds the real Donald Douglas, an individual with vision to see into the future and with ability to carry his plans to fruition.

Douglas, in addition to having built the world cruisers, developed the Martin bomber, this country's biggest heavier-than-air flying machine, and supplied the navy with a big assignment of torpedo planes which have proved highly efficient. Practically his entire time is devoted to the development and building of planes for government approval.

Douglas is of Scotch parentage, coming from a family of shipbuilders. He was born in New York City in 1892 and grew to young manhood in the Eastern metropolis. While attending public schools in New York his first inclination toward mechanical things developed. An excellent student, Douglas received an honor coveted by many but achieved by few — an appointment to the Naval Academy at Annapolis. Here he got his first real opportunity to follow the bent of his inclination. At first he contented himself with designing and constructing ship models. Then came his awakening to the possibilities in the field of aviation. The novelty of the automobile had not worn off then,

and airplanes, like Robert Fulton's first steamboat, were regarded as little more than the playthings of visionary crack-brains.

But the dreamer, then still in his teens, saw visions of future possibilities. He saw them so clearly that he abandoned the naval career as an Annapolis man and entered the Massachusetts Institute of Technology.

"I was interested in aviation from the beginning," said Douglas. "Automobiles were scarce then and I had had no opportunity to develop my mechanical inclinations until I entered the Naval Academy. There I was interested in shipbuilding until aviation began to attract attention.

"But the Government at that time did not seem to regard this new field very seriously and consequently not much attention was paid to it at Annapolis. So, because of the hampered facilities for aeronautic study and experiment at the Academy, I left and entered M. I. T."

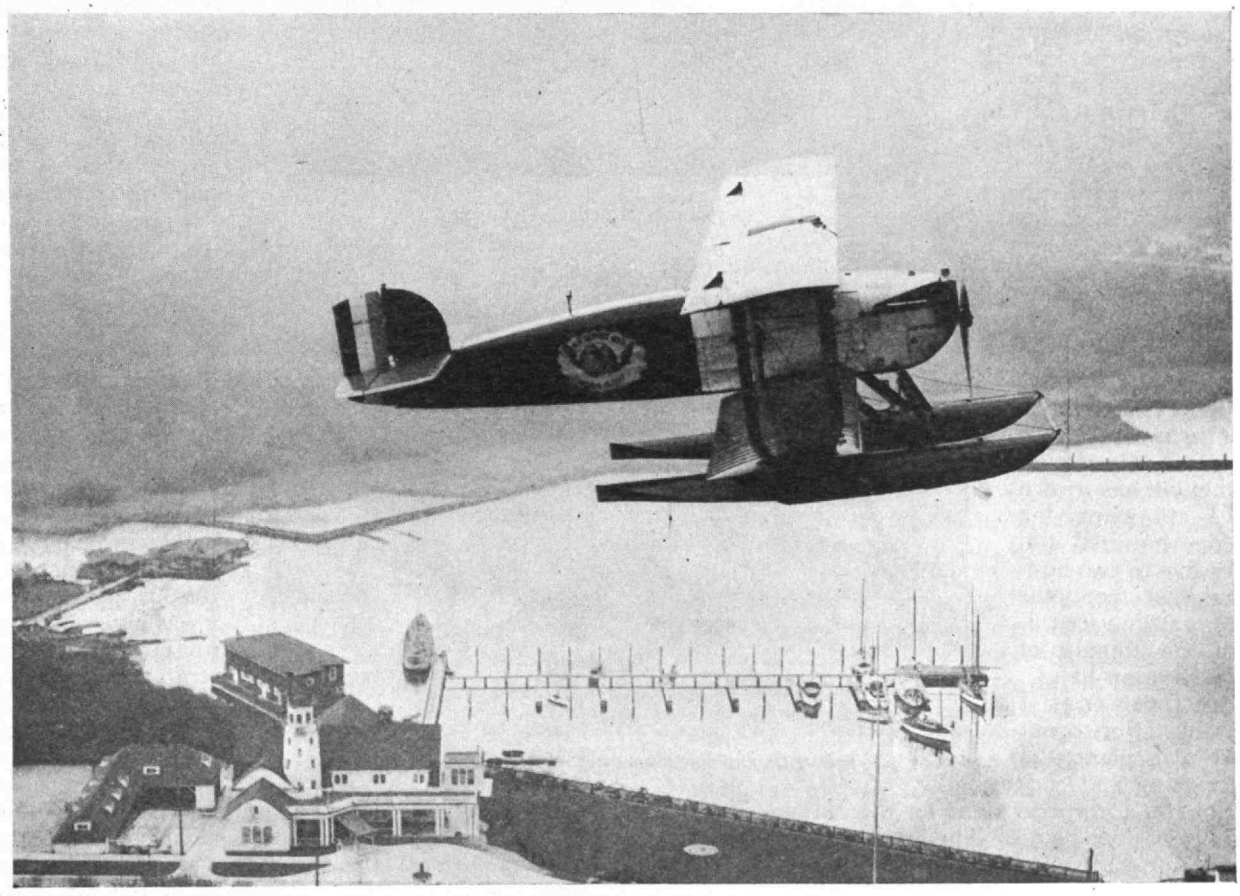
In June, 1914, Douglas stepped from the Institute of Technology with the degree of mechanical engineer and a faith in the future of the airplane which only a handful of men shared. Then in August of the same year the war clouds broke into the torrent of fighting, which was to last over four years. Soon after the war began, the airplane leaped into prominence as one of the foremost factors in the great struggle.

During the first year of the war, the future designer of the world-encircling planes, which have achieved one of the greatest triumphs in the annals of peace, stayed on at M. I. T. as an instructor. He was an assistant to Commander J. C. Hunsaker. These two were the first to start a course in aeronautical engineering. The experiments made by Hunsaker and Douglas are among the most notable in the annals of aeronautics. If you care to read the complete story of them you will find them in Volume sixty-two of the Smithsonian Institute Miscellany. The wind tunnel experiments were part of his scientific work, as was also a study of the dynamic stability of airplanes.

During those months of intensive study Douglas was dreaming his dreams. Even in those days, when flights of a few hours' duration were looked upon as remarkable feats, he visioned a day when planes would put the continents under their feet. He mapped out a course which he considered feasible, and the route taken by Lieutenant Smith and his co-flyers followed quite closely the lines set down by Douglas nearly a decade ago.

In 1915 the young instructor, then twenty-three, gave up his position at the Institute, and went to Los Angeles, where he became chief engineer for the Glenn L. Martin Company, makers of the famous Martin bomber. After a year with the Martin Company in California, Douglas was summoned to Washington as chief civil aeronautical engineer for the government, which was facing the possibility that the United States might be plunged into the European struggle.

In 1917, after the Glenn L. Martin Company had moved from California to Cleveland, Douglas was again engaged as an associate to the builder of the bombing planes. Here he remained until 1920, during



A Douglas Cruiser in the Air

which time the Martin bomber was developed under his direction and turned over to the government.

At this time Douglas felt the urge to enter the designing and building field for himself. Heretofore his efforts had all been expended in the employ of another concern. This decision Douglas regards as the second momentous one of his career, the first being his abandonment of his career at the Naval Academy to give himself over to a study of aeronautics at Technology. Consequently he severed his connection as chief engineer of the Martin Company and with no means of his own on which to start operations, migrated to Los Angeles.

DONALD W., '14
The Douglas That Did It

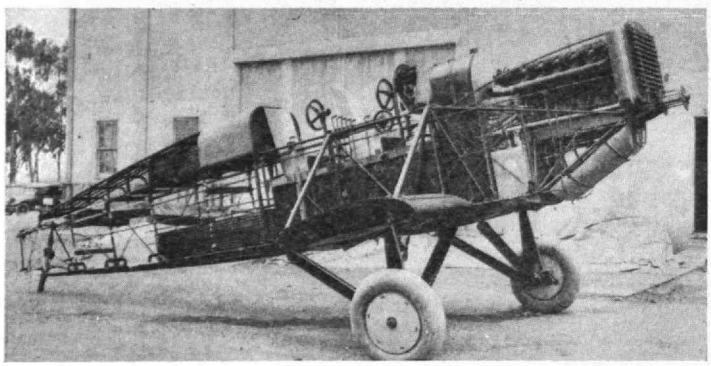
"My faith in the future of aviation was stronger than ever, but I had no money and was faced with the rather difficult task of raising means to get my plant started," said Douglas.

"I came to Los Angeles with plenty of faith in myself and with hope that I could interest some Los Angeles business men in my enterprise. I went to a number of the leading citizens and laid my plans before them. Aviation still was rather new, and regarded by many as impracticable, but I met with a cordial reception nearly every place I went.

"After ample consideration had been given to my plans I was informed that a committee of business men would underwrite a first loan sufficient to enable me to start operations.

"The banks thought they were crazy. But I got the money and started. Today the establishment has grown until I am employing from one hundred and twenty-five to two hundred skilled men, the number varying according to the amount of work I have on hand.

"The first task I undertook after opening my own plant was the designing and construction of a torpedo plane for the Navy. This was the DT-2 torpedo plane. The first one, built for trial purposes, proved successful, and the Navy since then has ordered some eighty of these planes.



One of the Douglas Planes in Process of Assembling

"The world flight that has just ended was instituted directly as a result of Lieutenant Nelson's efforts and ideas. Although I proposed such a cruise by air in 1915, nothing but talk resulted. Aviation had not then received much recognition and financially it was still very poorly off.

"As a general type of plane for this sort of venture I then had in mind a large multiple-engine seaplane, similar to the NC-4's that made the first flight across the Atlantic Ocean.

"During the war I developed the Martin bomber, which was America's first successful large machine, but after this experience and notwithstanding the fact that the Martin bomber still represents a thoroughly practical and efficient machine, I came to the conclusion that, in order to get the utmost in reliable and efficient service, a single-engined airplane was the best.

"Therefore, after I opened up my plant in Santa Monica in 1920 I developed the first heavy-weight, single Liberty-engined airplane in this country, building around more modern aero-dynamic principles.

"This airplane was the forerunner of the DT-2 torpedo planes, which brought me my first order from the government. With one 400-horsepower Liberty motor it did the work that previously had been done only with two Liberties.

"When I first learned of the Air Service's intention to attempt a world flight it awakened that old idea that had germinated some years before. I wanted to have a part in making it possible if I could.

"Accordingly I conferred immediately with the Air Service officials. I was given a favorable hearing and demonstrated that the type of plane we had developed was best for such an undertaking for a number of reasons—minimum number of parts requiring servicing, minimum needed number of spare parts, efficiency in carrying weights both off land and water, capability for making long sustained flights, efficiency in the air, low fuel consumption per mile, general airworthiness and handi-

ness to control under all conditions of loading, and, lastly, proved structural and mechanical correctness in all detail."

As if to emphasize the verity of the young builder's last-enumerated quality of his "dream" plane, the interview was interrupted by the entrance of two employees of the plant. Both older than Douglas, they addressed the shrewd young inventor almost reverently as "Boss."

They had struck a snag in making a difficult test of some materials in the laboratory and had come for help. A deft hand sought a chart amid a myriad of papers and leaflets in a filing cabinet. A few explicit instructions were given in regard to the all-important tests. It was no dreamer speaking, but a man technically and practically capable of leadership. The interruption had given a valuable insight into his keen technical knowledge, leadership, and insistence on correctness in every detail.

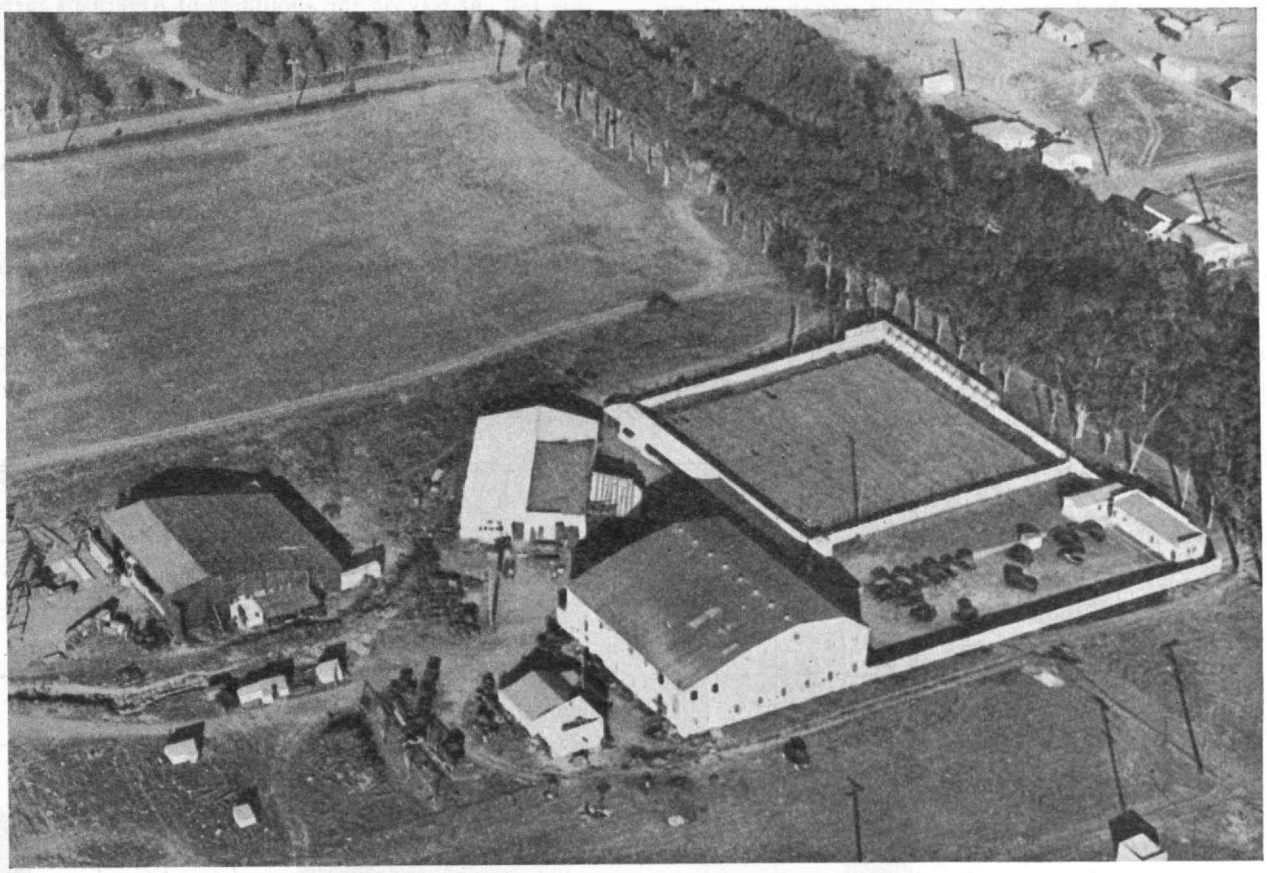
"Lieutenant Nelson," Douglas continued, "was appointed by the Air Service to go over the proposed airplane with me. After some extensive conferences and discussion of various changes to meet the service required he recommended the purchase of one such airplane for use as a trial plane.

"He worked in close coöperation on the job of building and testing the first cruiser, the *Boston II*. It was flown east by Lieutenant Nelson after only two or three hours in the air at Santa Monica.

"From the time the plane left the field here, throughout its tests as a land plane and a sea plane, it met with the highest approval from all the pilots and engineers of the Air Service," said Douglas quietly, with a note of satisfaction in his voice.

"This plane represented the combination of my engineering experience with the extensive and valuable field and maintenance knowledge of Lieutenant Nelson. It was built in September, a year ago. It was submitted to all sorts of tests by the Air Service in the East, and on January 1, I was authorized to build immediately four planes of the same type to be used on the round-the-world flight.

"Work began immediately. We put our best into it. I wasn't going to travel in the planes, but my hopes were. It would have been a great disappointment to me if they had failed. I checked the work on them personally and by the middle of March the last one was out of the factory, ready for testing. I had confidence in the planes and I had confidence in the men who were to fly them. I knew they would come through all right."



A BIRD'S-EYE VIEW OF THE DOUGLAS PLANT IN LOS ANGELES
Where the round-the-world flyers were designed and built

It is Douglas's nature to seek no credit for the success of the flight. This man of dreams who stood in the background watching with millions of others the flight of the airmen day by day in the "ships" that he built, spurns the suggestion that a laurel wreath is due the head that conceived such a flight and constructed the vehicles that carried the Stars and Stripes around the globe. He lays all honors at the feet of the aviators.

"The success of the flight was due principally to the courage, ability, and conservatism of the men in the planes," said Douglas. "They didn't take a chance when it wasn't necessary and I'm glad that when it

was necessary to imperil their lives the planes didn't fail them."

Douglas is happily married and the father of three children, two boys, six and seven, and a girl, aged two. He smokes a pipe, and likes outdoor pursuits, although he finds most of his time taken up by duties.

In his laboratories or drafting room Douglas finds his greatest delight. He is still dreaming and planning for further conquest of the air. The world flight is history to him now. He is looking ahead — for new fields to conquer.

The next ten years?

"It will see great strides in aviation, planes circling the globe in less than thirty days," is Douglas's answer.

"The successful termination of this flight I believe will do more than anything else to advance aviation in the eyes of the general public and place it in a position equivalent to the present place held by the automobile industry. The flight has demonstrated what can be done with proper planes in proper hands.

"This flight and other ventures of a similar character will hasten the day when the general public will use with confidence the unquestionable advantages of aviation and thus add more to the scope of man's life and the wealth of the world."

Thus with a broad view of the possibilities of his chosen field, this man who, as a boy, turned a deaf ear to pessimistic prophecies of the majority and followed his vision through to realization, relighted his pipe, smiled a cordial "Good day" and went back to his work, happy to let honors to which he might be due fall entirely on the shoulders of America's intrepid aviators.

A Technology Crossword Puzzle

By H. P. T., '85

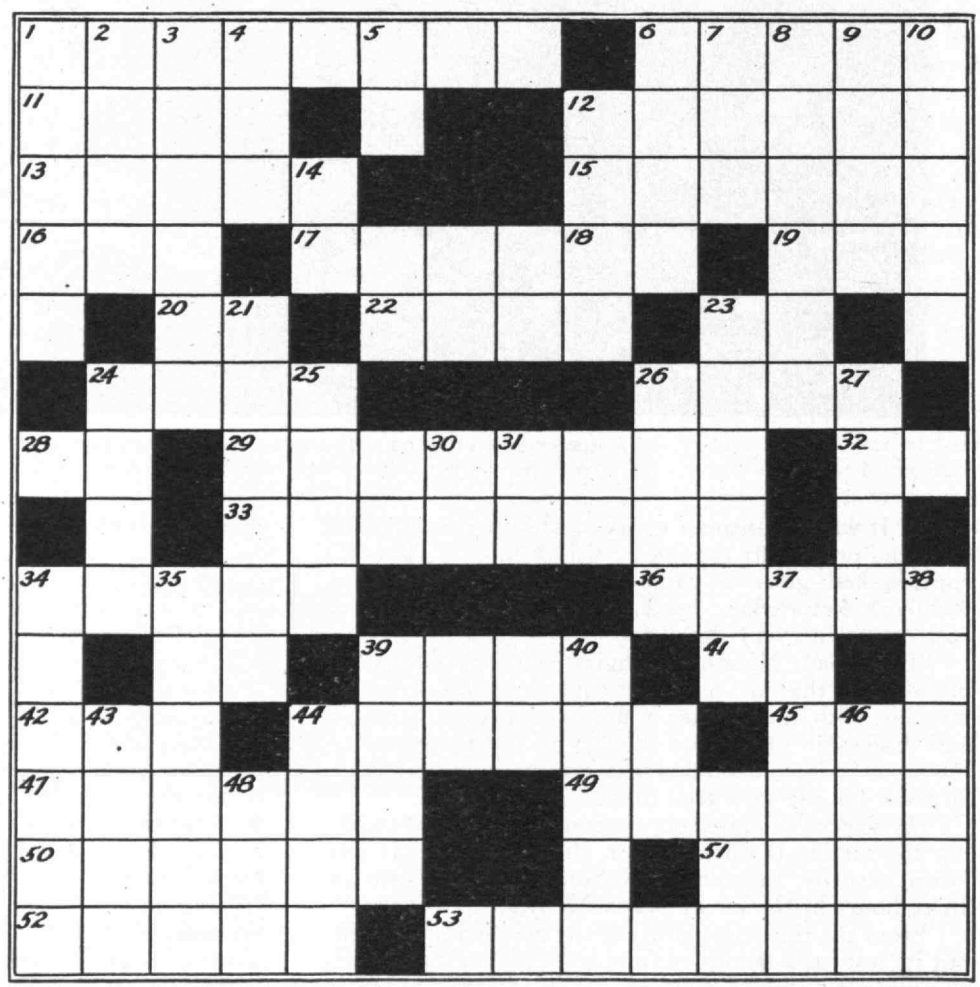
A specimen rare in Institute allusions. The author's modesty hides behind the above initials. Solution next month

HORIZONTAL

1. A man of many standards.
6. A prominent alumnus whose name is often mentioned in connection with the telephone industry.
11. A name associated with the wire industry in Massachusetts.
12. Editor, counsellor.
13. What students from Great Britain live on.
15. What the editors rightly believe to be one of the best college journals extant.
16. To be found in Institute.
17. Patriot, Economist, Administrator.
19. The second half of an African fly.
20. Initials on British mail wagons in King Edward's reign.
22. What Tech is.
23. To live.
24. Man's name, meaning physician (plural).
26. What the Tech Song Committee is seeking.
28. Nickname of Dean Burton.
29. The purpose of the Alumni in providing our student-center.
32. First and last initials of the Executive Secretary.
33. Alumni binders.
34. Much used in labs and shops.
36. What a student generally is when in Walker Memorial.
39. Its popularity as a vehicle is equalled only by his popularity as an administrative officer.
41. Graduate of Course II (abr.).
42. Three-fifths of limit.
44. County in Maryland.
45. What a lecturer feels like at the close of the hour on a warm day.
47. What a student sometimes does.
49. Jim the Penman of the Corporation.
50. A green mineral (German spelling).
51. Possessive pronoun.
52. A quality of the personnel office of the D. I. C. & R.
53. What the bursar seldom does with student fines.

VERTICAL

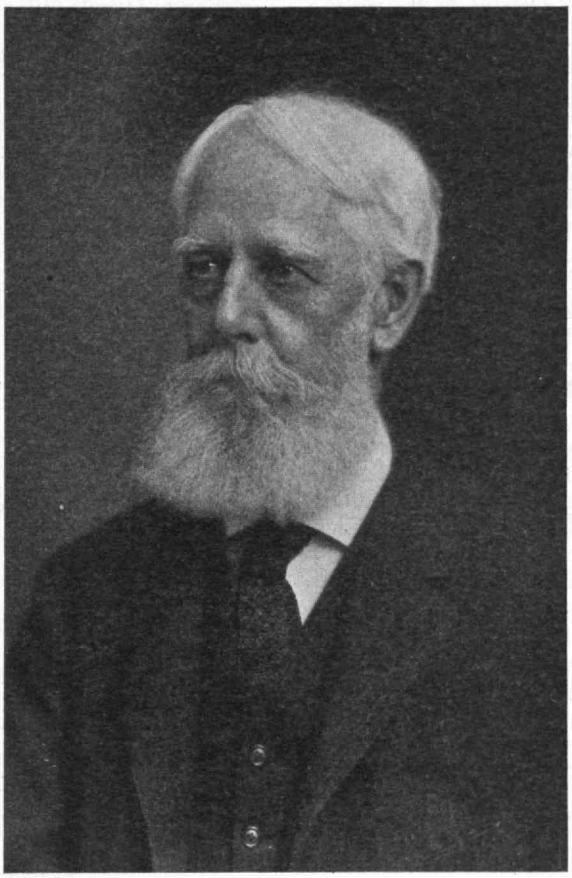
1. A camouflage for one of our greatest benefactors.
2. An act in which a coin is involved; and often used by students to decide important questions.
3. Places dependence on.
4. An ending used in names of hydrocarbons of the paraffine series.
5. In the direction of.
6. An inhabitant of South Africa.
7. First two initials of the Executive Secretary plus "a five spot."
8. Part of a Latin expression meaning "a thing said in passing."
9. What holds every alumnus to his college.
10. Shaped with a sharp instrument.
14. Point of compass.
18. What furnishes occasional transportation over Harvard Bridge (abr.).
21. Used with a muzzle-loading firearm.
23. A soothing agent.
24. Likewise.
25. A prophet.
26. A part which examinations play in student life.
27. Alleged information (slang much used by students).
30. Upon.
31. Small state (abr.).
34. The prof who easily holds the record for men killed during his lectures.
35. The man who believes in Course VI-A and lets you know it.
37. Sometimes felt by students on approaching the Dean's office.
38. Technology is a monument to his clear, far-sighted vision.
39. The rate at which vacations pass.
40. Found at Technology and the State House.
43. Used by civil engineers.
44. Seat of the engineering school having the longest continuous existence in America.
46. Four vowels.
48. What all the world is but thee and me.
51. Nautical exclamation.



TECH MEN IN THE PUBLIC EYE

Francis H. Williams, '73

Roentgenologists have been given convincing proof that lost vision can be restored by radium treatment. Two men who had been blind but now see were present at the convention of the American Roentgen Ray Society at Swampscott and walked among the doctors to exhibit their eyes. The doctors gathered in groups around them and examined their eyes with keen interest and admiration for the accomplishment reported by Dr. Francis H. Williams of Boston, who had treated the blind men with radium. One of the men had received treatment of his left eye only, which some time ago had no vision, even to distinguish between daylight and darkness, and today that eye seemed clear and perfect. The gray cloud that once covered the center of it had disappeared and the man could see even to read newspapers. His right eye had not been treated yet and had no vision; its cornea was covered by a gray spot. Both men walked from one group of doctors to another in the convention hall, everywhere becoming centers of interest.



Notman

FRANCIS H. WILLIAMS, '73

Dr. Williams has recently achieved startling effects by the use of radium treatments for the blind

The story of their treatment was related by Dr. Williams, a pioneer in Roentgenology, who was the first speaker of the day. He discussed several problems, and exhibited some early instruments by which he illustrated the development in Roentgenology, but concerning the treatment of the two blind patients he gave only general information. One of the doctors asked for detailed information but Dr. Williams replied that he is not yet prepared to make such a statement, especially as these two men had not been treated exactly alike. He said he would make a statement after results were known in other cases now under treatment or observation.

Dr. Williams referred also to a successful radium treatment of lesions of six years' duration on the hands of an X-ray worker.

—Boston Evening Transcript

Paul W. Litchfield, '96

The men who made presumably the last of the Zeppelins are soon to follow her to America.

That was announced yesterday by P. W. Litchfield, First Vice-President of the Goodyear Tire and Rubber Company and Vice-President and General Manager of the Goodyear Zeppelin Company, which a year ago bought exclusive American rights to the patents, drawings, and trade secrets of the German organization.

"We are going to bring the brains of the Friedrichshafen plant to Akron," he said, "not the workmen, of course, but all the men representing the vast technical experience that has made the Zeppelins possible —the engineers and the draftsmen needed to build the great dirigibles of America's future."

Of the crew that brought the ZR-3 to this country, only Capt. Ernest Lehmann will go to Akron, Mr. Litchfield said. Dr. Hugo Eckener, head of the German Zeppelin Company and commander of the ZR-3's flight here, will return to Germany soon and may remain there permanently, as his company will maintain its executive offices in Germany, despite being forced to dismantle its factory.

The Goodyear-Zeppelin Company will be an "American Institution with American workmen and American materials," Mr. Litchfield told a reporter for *The World* at the Waldorf-Astoria, where he gave a dinner last night to the officers who brought the ZR-3 here. It will concern itself with construction of dirigibles of the Zeppelin type, rather than with their commercial operation, although this phase of the industry may be entered later.

Mr. Litchfield, long considered one of this country's foremost authorities on lighter-than-air craft, said that for the first few years the Goodyear Zeppelin Company would inflate its ships with helium rather than inflammable hydrogen. With the growth of the industry, he thinks some ships, particularly those carrying only express and mail, may use the more buoyant gas.

The Goodyear aircraft works at Wingfoot Lake, Akron, will be the basis of the new industry, the equipment being enlarged and extended for the construction of larger ships, which will continue the Zeppelin line under a foreign flag. The Zeppelin experts will be brought to America "immediately."

—New York World

Augustus H. Gill, '84

"The enormous and ever-increasing use of gasoline and of hydrocarbon gases has caused many mysterious and disastrous explosions and fires," says Augustus H. Gill of the Massachusetts Institute of Technology. "One of the most mysterious of these fires, which was attended with fatal results, was the 'hairdresser's accident' of June 26, 1897, in London. A petroleum-containing hair wash was being applied as a shampoo when it suddenly ignited, burning the woman. There is no doubt but that frictional electricity was here generated in sufficient quantity to ignite the petroleum vapor.

"An automobile was destroyed and its owner, a naval surgeon, severely burned, through the firing of the gasolene by a spark produced by frictional electricity. The surgeon had walked some distance to his garage in his fur coat and rubber boots. The friction of the flapping coat against his boots generated the electricity and the boots insulated him from the ground and allowed his body to store it.

"A silk dress that had just been cleaned by gasoline was removed from a basket. This movement of the silk generated an electric spark that fired the gasoline vapor still remaining in the dress after cleaning. The dress and other nearby garments were burned.

"When woolen fabrics are washed in ether or gasoline, they become electrically charged. This charge is so great as to produce sparks when touched by a person.

"It has been demonstrated beyond question that when gasoline is pumped through hose, frictional or static electricity is generated: under certain circumstances a pressure of 400 to 500 volts has been generated. Even when gasoline is poured through chamois skin, dangerous sparks have been produced. This chamois strainer must be replaced by 80 to 90 mesh wire gauze which will exclude water when first wetted with clear gasoline. A chauffeur hung an ordinary five-gallon can on the hook of a common gasoline pump. The bail of the can had a wooden handle which insulated the can from the pump. A gallon had been pumped when a spark jumped from the can to the pump and fired the gasoline. After putting out the fire the filling of the can was repeated and it caught fire a second time.

"In filling a can or motor-car tank, care must be taken that good metallic contact is made between the nozzle of the hose and the article filled.

"The explanation given of the cause of the hairdresser's accident — the generation of frictional or static electricity by rubbing of hair or fur — will explain the two following incidents:

"It is the custom of dog (and cat) catchers to asphyxiate their catch in a 'tank' or 'dispatch' with ordinary illuminating gas. In 1914 the dog officer in Providence threw a cat into the lethal tank; when turning on the gas it exploded, singeing the officer's hair and injuring another. This was the third time such an accident had occurred — many dogs had been disposed of without trouble.

"In New York the Society for the Prevention of Cruelty to Animals reports that in the course of twenty-five years there have been half a dozen minor explosions; the last one, however, was so serious that they decided to adopt other means."

—Buenos Aires (S. A.) Herald

Maurice F. Delano, '98

Failures among amateurs raising pure bred chickens are often due to the lack of interest which the breeders who sell the foundation flock take in advising, schooling, and helping the beginners. This is the opinion of M. F. Delano, one of the biggest, if not the biggest, poultry breeders in America.

By paying as much attention to the service given to his customers as he does to the skillful mating and management of his flock, he has been able to sell an aggregate of more than $1,000,000 worth of eggs, chicks, hens, and roosters produced on his 105-acre farm on Marthas Vineyard, an island five or six miles off the coast of Massachusetts. He has built up his business on the principle that a breeder's success depends largely upon the success of his customers.

Twenty-six years ago Mr. Delano completed his work in civil engineering at the Massachusetts Institute of Technology. The day he reached home he piled his measuring chain, compasses, theodolite, and chronometers into the garret, where they have been ever since, and then went into the poultry yard, sat down on a chicken coop to feed the hens, and started to figure out the best way to serve those who bought his birds and eggs.

Mr. Delano starts men who have never before handled chickens. He has made a study of the conditions found with all kinds of novices who buy eggs or stock from him, so that he is able to advise intelligently, whether the flock is to be started in his own state, in Arizona, or in Illinois.

Backyard poultry keepers and farm flock owners who handle pure bred regard him as the "high power broadcasting station of the poultry world." The poultry wizard of Marthas Vineyard was one of the big exhibitors and heavy winners in the single comb Rhode Island Red and Buff Orpington classes at the National Poultry Show recently held at the Union Stockyards, Chicago. Thousands of questions were asked him during the week. It was common to see little groups of show visitors huddled around him in front of the exhibit cages to hear his answers to practical questions. Every time he attempted to "broadcast" an answer dozens were stretching their necks over the wire cages "tuning in" to get every word they could before he "signed off."

—Lexington (Ky.) Leader

George H. Mead, '00

The President of the Spanish River Pulp and Paper Mills, Ltd., is Mr. George H. Mead, a native of Ohio, a graduate of Hobart College and of the Massachusetts Institute of Technology.

Upon graduation he started his business career with an artificial silk concern, but remained with them only a brief time, for the attractiveness of the Paper Industry commanded his intelligent interest, and he shortly joined the Mead Pulp and Paper Company of Chillicothe, Ohio, where his family had for many years had the controlling interest. He visioned the future that has now become history, in which history he has played an important rôle.

Foremost as an operator, he is at the same time, a friend and leader. In the Presidency of the greatest newsprint manufacturing Company in Canada, he commands the admiration of his thousands of willing helpers, the men who are co-operating with him in improving the standards of employment and processes.

—Pulp and Paper Magazine

UNDERGRADUATE AFFAIRS

The Advisory Council Landislates

"Yes, I remember we once had a baseball team which went up and played Williams. We had only eight men, so we stopped on the way and hired a pitcher but he wasn't much good and besides one man got lost and Williams loaned us a third baseman. We didn't make any runs and they got a lot." Thus mused an Elder Statesman at the December meeting of the Advisory Council on Athletics when it informally discussed the plea for a Varsity baseball team.

Undergraduates interested in the matter were there and laid before the Council the story of last year's "Beaver Ineligibles" team, recruited from the men playing the sport intramurally. They budgeted the cost of a Varsity team for the coming season at about $850 and said that many more men would come out and play if there were a Varsity. The "Beaver Ineligibles" had been formed under the guidance of W. H. Robinson, Jr., '24, and L. E. Bannon, '26, both of whom were present to urge the Varsity team proposal.

The Advisory Council has a long-standing and well-merited reputation for backing any form of clean athletics in which a reasonable number of undergraduates are interested as participants. Its patience is likewise generous and voluminous. It is the last to favor abandonment of a sport which has received the popular vote of being in a hopeless slump. Witness basketball a decade ago, crew right after the war, or that more recent victim of doldrums and debility, hockey. Usually its patience is rewarded. Like many experienced investors, however, it is rather chary and skeptical of backing an attempted renaissance. Therefore after musing over the metaphysical aspects of Varsity baseball the Council proceeded to get down to business and strip the subject of its polite verbiage.

Four major inquiries were voiced: 1. Would it interfere with classroom work? 2. Could it be financed on less than twice the $850 figure? 3. Were there facilities for practise and competition? 4. What about the amateur status of college ball players, anyhow?

Question number one was based on a feeling said to be prevalent in some collegiate circles that athletics were receiving altogether too much attention and that something ought to be done to encourage undergraduates to pay more than perfunctory attention to their classroom work. It was clear after several present had spoken that the Technology academic authorities

Athletic Results to December 15

CROSS-COUNTRY

Nov. 15—N.E.I.A.A.—1. Williams, 66; 2. Maine, 74; 3. University of New Hampshire, 87; 4. Holy Cross, 101; 5. Bates, 128; 6. Boston College, 143; 7. Brown, 197; 8. Middlebury, 200; 9. Bowdoin, 231; 10. Rhode Island State College, 235; 11. Boston University, 241; 12. Massachusetts Agricultural College, 276; 13. M.I.T., 396; at Franklin Park, Boston.

Nov. 24—I.C.A.A.A.A.—1. Pittsburg, 57; 2. Harvard, 75; 3. Syracuse, 82; 4. Yale, 117; 5. Maine, 136; 6. Columbia, 157; 7. Cornell, 170; 8. Dartmouth, 183; 9. Princeton, 229; 10. M.I.T., 254; 11. Rutgers, 266; 12. Georgetown, 268; 13. University of Pennsylvania, 364; 14. C.C.N.Y., 423; at Van Cortlandt Park, New York.

HOCKEY

Dec. 5—M.I.T., 3; Boston University, 3; at Boston Arena.

SOCCER

Nov. 18—M.I.T., 9; Northeastern, 2; at Cambridge.
Dec. 3—U.S.M.A., 3; M.I.T., 1; at West Point.

Calendar

Jan. 10—Basketball—Northeastern University at M.I.T.
Wrestling—Northeastern University at M.I.T.
Jan. 14—Track—Harvard Relays at Soldier's Field.
Jan. 16—Basketball—Williams at Williamstown.
Swimming—Yale at New Haven.
Jan. 17—Basketball—Amherst at Amherst.
Hockey—U.S.M.A. at West Point.
*Rifle—Michigan Agricultural College.**
Wrestling—Yale at New Haven.
Jan. 20—Basketball—Brown at M.I.T.
Jan. 21—Wrestling—Harvard at M.I.T.
Jan. 23—Swimming—Amherst at Amherst.
Jan. 24—Basketball—Harvard at M.I.T.
Boxing—Syracuse at Syracuse.
*Rifle—Georgetown University and Johns Hopkins.**
Swimming—U.S.M.A. at West Point.
Wrestling—Tufts at M.I.T.
Jan. 28—Basketball—U.S.M.A. at West Point.
Track—Millrose A.A. Games at New York City.
Jan. 31—Basketball—Boston University at M.I.T.
*Rifle—University of Pennsylvania and George Washington University.**
Swimming—Brookline Swimming Club at Brookline.
Track—B.A.A. Games at Boston Arena.
Wrestling—Boston University at M.I.T.
Feb. 3—Fencing—Norwich University at Northfield.

** All rifle matches by telegraph.*

would find their usual persuasive or amputative methods ample should any such tendency arise locally. Anyhow, baseball would not interfere any more than spring track or some of the winter sports.

The financial problem, second on the list, evolved many opinions as to the necessary expense of individual items and how the total season's cost could be curbed and controlled by a change of schedules. This was reminiscent of the supposed impossibility of ever financing a crew, which we heard argued at length some years ago. Today crew is getting along very well indeed. There isn't much doubt, that if convinced of Varsity baseball's merits, the Advisory Council will again demonstrate its usual supporting ways.

Two diamonds, while not ideal, are available. A new diamond is to be constructed by the Institute on the new land west of Massachusetts Avenue, but this cannot be made ready until a year from next spring. Some indoor work can be carried on in the Hangar Gym and it was solemnly stated that "sliding practice could be held on any hardwood floor." This statement was afterwards qualified by inserting 'base' before 'sliding'!

One member feared possible competition of other college baseball teams and the presence of major league professional teams in Boston. "Harvard was seriously hampered by major league exhibitions at Braves Field last year," said another, who evidently did not go to Braves Field very often last year or the year before either.

Most of the doubts were gathered under the general head of Professionalism. Although it is true that so far as we know there have been no college Black Sox, nor have defamatory charges been plastered against it by Mr. Ban Johnson, intercollegiate baseball is afflicted with its own particular bugaboo, which is the summer player or the so-called 'semi-pro.' This latter is an euphemistic misnomer coined to remove the supposed stigma of being known as a professional athlete. The 'semi-pro' is one who wants to make a little or a lot of money on the side, preferably receives it indirectly, and at the same time wishes to be a candidate for the honors and adulation heaped upon the successful amateur who supposedly engages in the game for the love of the contest, the glory of his institution, and the applause of his mates. The acknowledged professional athlete on the other hand commands the respect of all good sportsmen. The A. A. U. settled this 'semi-pro' problem in track athletics once about a group of paid coaches who wanted to be called 'non-competing amateurs.' It said you are either 'amateur' or 'professional.' There are no intervening stages. There is no special class of 'simon-pure amateurs'; all amateurs must be 'simon-pure.'

Baseball is an exception to most other college sports, which are pretty well regulated as to amateur conditions. Most universities and sports-governing bodies take a definite stand for enforcement and their rules are generally lived up to both in spirit and in letter. With baseball many institutions temporize. Some waver, some shut an eye, and some ignominiously flop.

The college baseball star receives tempting offers to play on summer hotel and camp teams, on industrial teams, and with pick-up quasi-amateur home-town organizations. He sees a chance for easy money, often badly needed, and, if his conscience troubles him, matters are usually arranged so that he gets extra money for the job to which ball playing is nominally incidental. He can therefore persuade himself into believing that he is still an amateur. Or again he may be hired as a counsellor at a boy's camp, athletic coaching being the major portion of his work. Here his collegiate ball-playing reputation makes him a valuable man for his job. It commands the awe of the youngsters and as their coach he therefore receives a respectful and willing attention from them, to the ultimate benefit of his pupils. Yet he violates the rule against "receiving pay or financial benefits in consideration of or as a reward for instructing or preparing any person in or for any competition, exhibition, or exercise in any sport when such act was not merely an incident to his main vocation or employment." He is receiving pay for coaching and is thus professionalized. If he were a track athlete the I.C.A.A.A.A. and the A.A.U. would summarily disbar him from further competition. As a college baseball athlete how do the college authorities treat the matter? Out of 24 New England Colleges, 16 permit their men to play summer ball under certain conditions and 20 permit their men to coach summer nines. In just one half of these 24 colleges, "a man is eligible [to represent the college] after receiving money for playing summer baseball in excess of legitimate expenses." Only 5 of the 24 bar men who have played "summer baseball against a professional nine not operating under the National Agreement." If, however, this 'professional nine' happens to be operating under the National Agreement, in other words a legitimate, above-board, and self-acknowleged professional nine, then 4 additional colleges scramble to put up their bars. These figures were taken from data furnished by the college authorities. Each and every one of them has the amateur rule and five-sixths of them having smugly written it on their books only to disregard it utterly in practice.

This condition is what makes the Advisory Council hesitant about Varsity baseball. Concerted action, now being started in some quarters, may clarify this situation, and it is the hope of these columns that they may some day publish a result like this: "At Briggs Park: Technology 2, Williams 1. There were two out when the winning run was scored."

The Institute Committee

The proposed change in the membership of the Institute Committee which was hinted at in these columns last month has now been effected. After a session in which much argument was used but which was free from any rancor, the proposal that the separate Professional Societies be deprived of their seats and that one man represent the Combined Societies was adopted. The idea is twofold: first, that it will make the Institute Committee a less unwieldly body, and, secondly, that the proper supervision of the professional societies may come from the heads of their respective departments rather than from the Institute Committee.

The Boit Prizes

Announcement has recently been made of the award of the Boit Prizes for written work done in connection with the Sophomore English course of the third term of last year. The winners were J. B. Coleman, W. P. Lowell, Jr., M. B. Morgan, all '26 and W. W. Boyd, Special.

The Boit prizes are taken from a fund of $5,000 left to the Institute in 1921 by the late R. A. Boit for the purpose of awarding prizes for the best theme work in Sophomore English.

NEWS FROM THE ALUMNI CLUBS

Detroit Technology Association

Though the Detroit Technology Association has not answered the Review's roll-call each month, it has been active all fall with regular dinners and bowling meets. Instead of having noon luncheons this year, dinners once a month at the University Club have been substituted and they have proved much more popular and satisfactory.

An Intercollegiate Bowling League exists in Detroit with twelve colleges rolling each week. It is the source of a lot of fun, fine feelings and competition and affords a meeting place for Tech men at that time. Currier Lang is Tech's captain.

Detroit had a very delightful and impromptu dinner last month on the occasion of the American Public Health Association meeting in Detroit. We were happily surprised one day to learn that about forty Tech men were among the delegates. Most of them came down to a dinner we had for them at the University Club. These men were from all over the country and represented many different classes, mostly of Course XI. Professor Prescott gave a nice talk on things at Tech in general and Professor Taylor told the Detroit men something of the work and nature of the association whose convention these men were attending.

This meeting afforded a chance for Harold Green, Chuck Loomis, Herb Gfroerer, Fred Hine, Milt Pettibone, Joel Connelly, Phil Baker, Aimé Cousineau, and Carl Buck, all of '16 or thereabouts, to have a get-together of their own.

Herbert V. Thaden is continuing to become a well-known and prominent figure in aeronautical circles as a result of his participation in the national balloon races.

E. A. McGonigle, '96, and Frank Davis, '04, as McGonigle & Davis, Building Contractors, are rapidly completing the erection of a very beautiful new twenty-six-story office building in the heart of the down-town district.

Philip C. Baker, '16, *Secretary*,
768 Penobscot Building, Detroit, Mich.

Technology Club of Rhode Island

A very successful meeting of the Technology Club of Rhode Island was held at the T. K. Club in Pawtucket on November 19. The gang assembled at 6:30 and proceeded immediately to satisfy the cravings of the inner man with real Technology efficiency. During the dinner, entertainment was furnished by the S. A. E. quartette: Norris Abbott, Jack Wood, Les Fletcher, and Bill Warren. Regular M. I. T. cheers were given for President Mackenzie, Bill Warren, and Jim Finnie. A spirit of joviality and good fellowship prevailed much in contrast to the traditional solemnity and aloofness of Technology gatherings. At a short business meeting which followed the dinner, it was voted to contribute $50.00 to the Institute Athletic Fund.

Four picked teams battled for the bowling supremacy of the club. Team 2, captained by Jim Finnie, was the winner by a small margin over Team 3, in spite of the remarkable bowling of Howard Fisher and Hovey Freeman for the latter. By their exhibition on the alleys, it is apparent that when many of the club members chose the engineering profession, the world lost some expert acrobats and tumblers. The success of the meeting was due largely to President Mackenzie and Bill Warren.

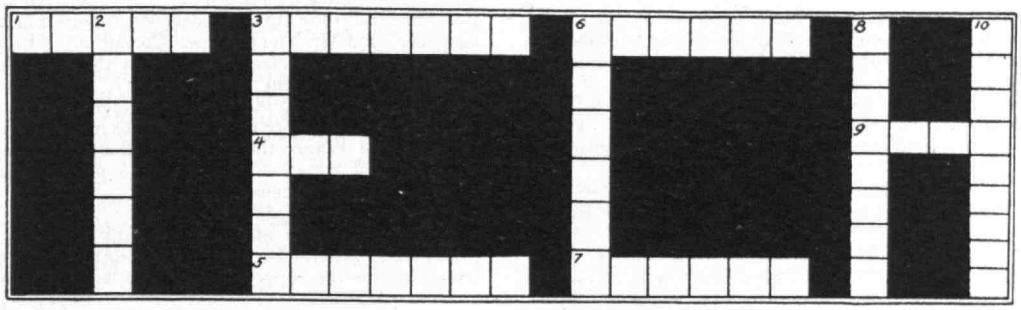
L. E. Knowlton, '16, *Secretary*,
Providence Gas Company, Turks Head Building, Providence, R. I.

Technology Club of New York

The Entertainment Committee has thus far given us two very excellent programs: on October 31 the Hallowe'en Party and on November 20 the first dinner talk by Mr. O. C. Horn. Mr. Horn's subject was "Advertising — Why It Works and How." Anyone who missed this talk missed a real treat. We wish to inform you that the Committee has several more very interesting speakers on the program, each of whom is an authority on his subject.

Robert J. Marlow, '17, *Executive Secretary*,
17 Gramercy Park, New York, N. Y.

The Five-Year Reunion Committee Speaks



Dennie's Crossword Puzzle

HORIZONTAL:—1 Salutation 3 Normal 4 At This Time 5 Approaching 6 Former Students 7 Secure 9 Likewise
VERTICAL:—2 Hearken 3 Assembly 6 Be Present 8 Gratification 10 Satisfaction

Three men were in the smoking compartment of a swiftly moving train. The first told of traveling so fast that the fence poles looked like a fine-toothed comb. The second, with more imagination, described a record trip with the telephone poles looking like a board fence. The third, not to be outdone, told of speeding between alternate fields of corn and beans at such a rate that they looked like succotash.

But that is not as fast as the 1925 All-Technology Reunion will move. The committee is going to have speed. Things are going to move. There will be neither dead nor injured moments any time during June 11–12, 1925.

But there will be jambouree dinners, luncheons and teas—sea trip and frolic at Nantasket—a night of nights at the Pops—and surprises such as never before were offered to a modest, timid, shrinking violet of a Tech man.

There is just one more warning. Prepare for much worse. Also set down those dates—June 11–12—on your tickler right now.

We repeat: Trek back to Tech, June 11–12, 1925.

NEWS FROM THE CLASSES

News from even-numbered classes is published in issues dated November, January, March and May. News from odd-numbered classes is published in issues dated December, February, April and July. The only exceptions to this rule are those classes whose Secretaries have guaranteed the appearance of notes in every issue. These classes are: 1895, 1896, 1900, 1901, 1902, 1905, 1907, 1911, 1912, 1914, 1915, 1916, 1917, 1918, 1919, 1921, 1922, 1923 and 1924. Other classes adhere to the alternate schedule. Due to strict limitation of space, The Review is unable to publish lists of address changes of members of the Association. The Alumni Office, in Room 3–209, M. I. T., will supply a requested address or will act as the forwarding agent for any letters addressed to members of the Association in its care.

'70

Members of the class will be grieved to hear of the death on September 15 of Charles F. W. Archer, who was with 1870 in the first two years of its Tech life. Mr. Archer was born in Salem, Mass., in 1851 and after his Tech career he at once entered his ultimate profession — newspaper work. After three years on the staff of the *Worcester Gazette* and a short time with the *Boston Advertiser* he became associated in 1883 with the *Boston Journal*. With this newspaper he remained for twenty years, first covering the news of Salem and vicinity and later being assigned to cover Boston City Hall. In 1903 he left the *Journal* and went to the *Boston Herald* for the next four years. His last journalistic connection was with the *State House News Service*, where he served from 1907 to 1916 reporting the news of the Senate. In 1916 Governor David I. Walsh appointed him to the State Board of Efficiency and Economy, on which he served until he retired in 1921. He leaves two daughters, Mrs. George F. Ashton of Salem, and Mrs. E. Kinsman Banks of Swampscott; one sister, Mrs. M. D. Ross of Jamaica Plain; and five grandchildren.

Robert H. Richards, '68, *Acting Secretary*,
Carter Hall, Warrenton, Va.

'74

The new clock presented to the Library by the Class of '74 on its Fiftieth Anniversary was inspected a short time ago by President Barrus, Vice-President Chase and Secretary Read and found to be keeping good time and giving pleasure to everyone who had occasion to use the Library. The clock is a very handsome ornament as well as a useful addition to the equipment of the Library. We advise all '74 men who have not seen it to take the first opportunity to visit the Library and set their watches by it.

A quarterly lunch was held at the City Club on October 15. Those present were Barrus, Bouve, Brown, Chase, Nickerson, Read, and Russ. Mr. Russ announced that he would start on a trip around the world the day after he deposits his ballot for President of the United States. His itinerary embraces Los Angeles, Honolulu, Shanghai, Hongkong, Manila, Singapore, Colombo, Suez, Alexandria, Naples, Genoa and Marseilles, arriving back in Boston on May 4, 1925.

Mr. Holbrook writes from Berkeley, Calif., that he hopes to see us all next spring, from which it is evident he will visit the East at that time.

Mr. Barrus has given up his former home in Brookline, and moved to the seashore on the Quincy Shore Boulevard, Quincy, Mass., near the Atlantic end of the boulevard. He hopes to invite the class to a clambake or surf-bathing fête at his new home sometime during next summer.

Mr. Stevens writes from New York acknowledging the receipt of the 1924 class directory, and voices a strong feeling of interest in the affairs of the class and its recollections. He notes the fact that after fifty years which have passed since graduation, nearly 40% of its members are not only alive but more or less actively connected with their business or profession, which would indicate that we came from pretty sound stock.

We regret to announce the recent death of our classmates, Crosby and Mansfield. The latter attended the last luncheon, previous to the one above reported, and was in good health up to the day of his sudden end.

Charles French Read, *Secretary*,
Old State House, Boston, Mass.

'82

It is with sadness that we here record the death on September 3 of Walter Hunt Hersey of Haverhill, Mass., who for almost twenty years was a confined invalid.

Mrs. Hersey writes: "He always appreciated your many attentions in bringing in a little of the outside world to him in the shape of the good letters you wrote regarding the class doings. He was always disappointed not to be able to attend the class reunions."

His was a fine example of character and courage which was fully recognized by his intimate friends. The following tribute appeared in the local paper: "In Walter Hunt Hersey's life, character stood paramount. Few people are put to such a test of it as he was, and no one could come through to the end with greater honor. Helpless invalidism shut him away from the things he most desired. He longed to be active, active in business, active in social life, and he enjoyed in recreation the things that call for activity. Gradually these desires of his heart were taken away from him and he became physically helpless. Mentally more alert than ever he faced problems that would have meant surrender to a weaker character. He met every blow with fortitude and became indeed 'the captain of his soul, and the master of his fate.' He was an inspiration to his friends, and his life had a far-reaching influence. His greeting was cordial, his handclasp was warm, and his patience was sublime."

Walter B. Snow, *Secretary*,
115 Russell Avenue, Watertown, Mass.

'84

Jarvis as Vice-President of the Rutland Railroad Company, announces the appointment of French as General Manager in charge of operations and maintenance. The position of General Superintendent is discontinued.

The Secretary regrets to make so belated an announcement of the death of G. F. Knapp on April 4, 1920. Further details are not at present available.

Members of the class have doubtless observed the return of duPont to the United States Senate at the recent election.

Newell and A. B. McDaniel, '01, have organized The Research Service, Room 712, Investment Building, Washington, D. C., for making investigations in Engineering and Economics; and presenting them before legislative and administrative bodies on behalf of civic and governmental trade organizations. Mr. Newell is listed as "Consulting Engineer" and Mr. McDaniel as "Consultant in Personnel."

Members of the class will learn with deep regret of the death of Alfred T. Bridgman, on Wednesday, November 26, in his sixty-seventh year. Bridgman had been incapacitated for active work for a year past. Before that, he had for many years been purchasing agent of the Water and Sewerage Board of Massachusetts. His enjoyment of class reunions and the pleasure he gave to others will be gratefully remembered. Mrs. Bridgman is still living at 27 Lincoln Street, Hyde Park.

The Secretary is indebted to many members of the class for prompt and generous response to a recent class letter inviting contributions for the support of athletics and other purposes.

Harry W. Tyler, *Secretary*,
Room 2–261, M. I. T., Cambridge, Mass.

'86

Several interesting and timely articles written by Dr. Alice G. Bryant, M. I. T., '86, have appeared in recent numbers of *The Medical Woman's Journal*. These papers emphasize the need of proper ventilation and humidifying of the atmosphere in dwelling houses.

In attempting to make our houses attractive and convenient too little attention has been given to those subjects. As a result "starting the furnace fire," while it may produce the desired warmth, too often lowers the humidity much below that necessary for health. As a result, colds, and various nose and throat troubles, are apt to follow.

Dr. Bryant has long been one of Boston's physicians who has specialized in diseases of the nose, throat, and ear. Numerous papers on the treatment of diseases of those organs, written by her, have been published in medical and health journals in recent years.

Dr. Bryant has also invented several instruments to aid in the correct diagnosis of diseases of those organs, and to more efficiently perform surgical operations upon them.

A recent periodical announces that J. Waldo Smith has been named one of the representatives of the American Society of Civil Engineers on a Board of Investigation and Coördination that is making an extensive study of engineering education under the direction of the Society for the Promotion of Engineering Education.

Arthur G. Robbins, *Secretary*,
Room 1–270, M. I. T., Cambridge, Mass.

'90

Dr. Willis R. Whitney, who is at the Head of the Research Department of the General Electric Company at Schenectady, N. Y., proposes to do away with dish-washing by the use of a modified phosphate rock in the making of tableware. A cheap process of manufacture from this rock could result in a system of throwing the dishes away after each meal, and of using the broken pieces as fertilizer. He believes that vast quantities of phosphate rock in existence in Iowa will be used in this way to carry phosphate back to the soil and thus furnish crop production. China dishes last entirely too long for this purpose, but it is possible to make a phosphate rock dish that will dissolve in a short time with the cost of production so low that a single use is entirely feasible. This is one of the dozen of the wonders that science will bring to mankind in the days to come.

Dr. Whitney also has an interesting article in the October issue of the *Tech Engineering News*, on "The Vacuum — There's something in it."

We note from the *Engineering and Mining Journal-Press* for July, that Allen H. Rogers has been elected President of the Swedish-American Prospecting Corporation. Rogers, Mayer & Ball will act as consulting engineers in the conduct of the business of the corporation, which has acquired the sole license under the Lundberg patents, for North, South, and Central America, to carry on electrical surveys for locating ore deposits.

Henry P. Spaulding donated some of his water-color paintings to the exhibition and sale held by the Boston Art Club on October 6 for the benefit of the Disabled Veterans of the World War.—The engagement of his daughter, Margaret Plympton Spaulding, to Mr. Rudolf Protas Berle, is announced.

Cards have been received announcing the marriage of our classmate, Frank Hayes, to Miss Mary Campbell Nye, on Wednesday, September 24, at Minneapolis, Minn.—Early in November, your Secretary had a very pleasant call from Frank, accompanied by Mrs. Hayes. Frank had motored about three thousand miles from Washington State, through the South and New England States. For the present his mailing address is General Delivery, Louisville, Ky.

In October your Secretary was also favored with a visit by Gardner Voorhees, accompanied by his wife and sister-in-law. They had motored from their summer place in Maine, down on to the Cape, and were then on their return, and headed for the White Mountains. Gardner is planning to be with us at our reunion next June.

The only golf that can be reported for the class, was a match between your Secretary and John Batchelder in October. While the result of the game was not the cause of it, Batchelder went to California for the month of November, accompanied by Mrs. Batchelder.

In response to the request of the Alumni Secretary, showing that many of our class have not paid their alumni dues and so do not receive The Technology Review, thereby keeping in touch with what is going on at Technology and what the members of our class are doing, your Secretary sent a personal letter to about one hundred and forty members. He is glad to report that the results have been quite satisfactory, but there is still room for many of you to come across.

A pleasant letter was received from Rev. George Francis Weld of Santa Barbara, Calif. Weld was only with us the freshman year, but is still interested in Technology, and any time that he comes East we hope to have him with us.

In *The Penn State Engineer*, the alumni October issue, there is a very interesting article on our classmate, Elton David Walker.

After a short stay at Technology as an Assistant, he joined the Faculty of Union College, where he remained until 1900, and was engaged at that time in various lines of engineering work. In 1900 he was appointed Assistant Professor of Civil Engineering at Penn State, with the understanding that he was to develop the work in hydraulic and sanitary engineering; and in 1901 he was made full Professor.

He was also Acting Dean of the School of Engineering from July, 1913 to August, 1915.

Before the United States went into the War, he was commissioned in the Engineering Reserve Corps of the Army, and after war was declared he was assigned to the Fifteenth Engineers and went overseas in July, 1917, where he was engaged in various lines of construction work.

He was awarded a citation by General Pershing, "for exceptionally meritorious and conspicuous services with the Fifteenth Railway Engineers at Jonchery and Liffolle-Grand."

After the close of the War, Walker continued his interest in the Reserve Corps, believing that thorough preparation of all the resources of the country for war was the best preventive of war.

He is now commissioned Lt. Colonel in the Engineers Section of the Officers Reserve Corps.

Do not forget that our Thirty-fifth Anniversary Reunion will be held in June. The dates have finally been set for the Alumni Reunion — Thursday and Friday, June 11 and 12.

Our plan will be to have our class reunion, Saturday, Sunday, and Monday, the 13th, 14th and 15th of June. We are endeavoring now to make arrangements at some resort near Boston, where we can be together and have our ladies with us.

Put the date down and do not forget it — as you will hear from us before long.

Why don't you fellows sometime come across and send a line to your Secretary, to let him know you are on earth? Get busy now, and drop him a line.

George L. Gilmore, *Secretary*,
Lexington, Mass.

'92

A clipping from a Pennsylvania newspaper announces that by a shift in the higher offices of the Pennsylvania Railroad, Elisha Lee becomes Vice-President in charge of operations in place of W. W. Atterbury, promoted. Lee has been with the road since his graduation.

Anyone reading the news from the classes month by month, can easily tell, without looking at the date of the class, about what decade since leaving the school is being written up, by the nature of the news. The first decade: looking for jobs and getting established therein, engagements; next decade: advances in those jobs, weddings; next decade: notable achievements and deaths. I draw attention to this fact at this time because I have had so frequently to note the death of one and another of our classmates since I have been secretary; last month two, and now another. Frank T. Westcott was seized with an attack of acute indigestion while away on a short vacation at the home of his sister in Pittsfield, Mass., where he was visiting with his daughter, Miss Cynthia Westcott, a member of the Faculty of Cornell. Westcott first graduated from Brown University and afterwards received the degree of Ph.B. at Tech. In 1896 he established an office in Attleboro, Mass., for the practice of civil engineering. He was Superintendent of Streets for several years also. In 1907 he was elected town treasurer and served continuously in this office up to the time of his death. The North Attleboro *Chronicle* says of him, "in his death the town has lost a valuable citizen, one whose services in any worth-while project were always at the command of his fellow citizens and one whose advice and counsel was always sought. Quiet in manner but of a most agreeable personality, he made a legion of friends, all of whom mourn his passing and will miss the comforts of his friendship." He leaves a son, Frank, a daughter, Cynthia, and two brothers and sisters. He was a member of Bristol Lodge, A. F. & A. M. and the North Attleboro Board of Trade.

John W. Hall, *Secretary*,
8 Hillside Street, Roxbury, Mass.

'94

Although somewhat late, it is pleasant to announce the wedding of George Owen, Jr., the athletically distinguished son of our George, to Miss Leonora Trafford of Milton, Mass., which took place in September. Eighteen ninety-four feels a sort of ownership in George Owen, Jr., and is very proud that the son of one of our members should have made an athletic record at Harvard which has probably never before been equalled, and in addition to this has other claims to distinction as his activities were not entirely confined to the use of his hands and feet.

The mail within the last few days has brought to the Secretary's desk a report on the water supply of the City of Bayonne, N. J., by Weston & Sampson, Consulting Engineers of Boston. This report, which takes up in great detail a very difficult problem of supplying water to a city in the most congested part of the country, is very complete in every detail and must be regarded as a model of its kind. Weston is certainly to be congratulated on the splendid manner in which this problem has been studied. As associate engineer connected with this study, we note the name of Tommy Wiggin, '95.

Another of our classmates has recently brought out a very important volume. H. B. Dates, the Head of the Engineering Division of the Case School of Applied Science, has prepared, in collaboration with Dr. Cady of the National Lamp Works, a new book on Illuminating Engineering. The history of this book, as told by the announcement of the publishers, is rather interesting. Beginning six years ago, the Case School, arranged for a series of lectures by specialists on the subject of illumination. Through the insistence of Professor Dates, these lectures were written out and expanded and then properly edited with the result that there has been produced a text on Illuminating Engineering which will not only serve as a book for instruction purposes in the scientific schools, but will also be a reference book of great value. Illumination has now become a most important subject not only from the standpoint of theatrical and domestic lighting, but also because of its importance in factories from the standpoint of industrial hygiene, general efficiency and accident prevention. Dates is to be congratulated on his energy and vision in insisting on the coördination of the lectures and publication of the work in the form in which it will appear.

A few days ago the Secretary spent several hours with F. C. Green, now President of the Standard Sewing Machine Co., of Cleveland, Ohio. It was an occasion for renewing an acquaintanceship dating

1894 Continued

back to our freshmen year, but one which in recent years has had few opportunities for personal contact. From the standpoint of class news, the item which will be most appreciated is making Green's present whereabouts known to the class, and also informing them of the splendid success he is having in his work. Eighteen months ago he was asked to wind up the affairs of a company which, through mismanagement, had gone on the rocks and which seemed likely to prove a total loss to those who had invested in it. By rigid economies, reorganization, and most of all, by intense personal application in which Green himself carried the work formerly done by three or four men in the office, he has not only prevented the company from becoming wrecked, but is well on the way to reëstablishing it on a sound and profitable financial basis. It is one of the most interesting instances of constructive work which has been brought to the writer's attention in a long time and Green will certainly receive the congratulations and best wishes of the class on his splendid performance.

The Secretary regrets to announce the death in July of S. P. Blanc of Denver, Colo.

A. L. Patrick has a son in the freshman class at the Institute, from whom the Secretary recently had a brief but pleasant call. If there are other sons of '94 men here it would be always a pleasure to meet them and to give them any assistance possible.

When in Cincinnati a few days ago, I attempted to see Proctor but found he was in New York on a business trip. A conversation with his daughter brought out the fact that he is as busy as ever and he still hopes to get to a class reunion some time.

Samuel C. Prescott, *Secretary*,
Room 10–405, M. I. T., Cambridge, Mass.

'95

An M. I. T. luncheon was held on Wednesday, October 29, at 12:30 p.m., at the New Boston Chamber of Commerce, Federal Street, to discuss plans for our Thirtieth Reunion next June in connection with the All-Technology Reunion. Hannah, Booth, Bourne, Roger Williams, Tucker, W. D. Parker, Barrows, Churchill, Winkley, Conant, and Fuller were present. After the lunch, which was held in one of the private dining rooms on the thirteenth floor, the class inspected the new rooms on the upper floor of the Boston Chamber of Commerce.

Karl S. Harbaugh, '95, died on September 19, 1924, after a two-month illness in Seattle, Wash. Reference to his work may be found in the *Iron Age*, New York City, published on October 20, 1924, also in the *Seattle Times* for September 19, 1924. He was local manager for the United States Steel Products Company.

"Mr. Harbaugh was born in Pittsburgh and spent his early boyhood in St. Paul, coming to the Pacific coast more than twenty years ago when his father took over the management of the Palace Hotel in San Francisco. He received his education at the Massachusetts Institute of Technology."

He was in Course II at Tech from 1891 to 1893. In 1893 he went to Portland, Ore., where he represented various steel mills which later became parts of the United States Steel Corporation. In 1900 he married Miss Ethel Williams of Portland, and went to Seattle, where he represented the United States Steel Corporation until his death. He is survived by his wife, his daughter, Miss Sallie Harbaugh, and his mother, Mrs. D. L. Harbaugh. He was a member of the Delta Kappa Epsilon fraternity, which he joined while a student at Tech.

"R. F. Haffenreffer, a capitalist of Providence, R. I., is a large stockholder in a new corporation and a number of the old Herreshoff stockholders are interested in the rejuvenated concern."

The above notice appears in the *Boston Transcript*, for November 15, 1924, under the heading of "Herreshoff Yacht Plant to Continue Work at Bristol, R. I." We thought he was interested principally in mining, farming and cattle raising. Now we suppose he will add yachting to the list.

At the Chamber of Commerce Building on November 17 a '95 luncheon was given to Gerard Swope, who had two thoughts he wished to talk over with the other members of the class.

After so many years have gone by, the desire becomes stronger among us all to see again the fellows with whom we were associated while at Technology, and at the coming Thirtieth Reunion in 1925, we, of course, would like to have the largest attendance possible. The difficulty of securing a large attendance is not only because of the time and the distance it would be necessary for many to travel, but because the question of expense is also important to a large number of the class. He therefore suggested that it might be a good plan to ascertain all of the members who could come to the reunion and to put into a pool the amounts they would be willing to contribute. This pool would then be used to defray the expenses of all members of the class who could attend. The thought is that this would equalize the burden of the expenses more fairly.

He also wished to get the reaction of the members of the class present as to the advantage of general studies at Technology, especially along engineering lines, so that graduates will have a broader basis on which to specialize in whatever direction they may be called to practice in after life.

The members of the class present were: Swope, Hannah, Defren, Cutter, Littlefield, Booth, Brackett, Barrows, Conant, Roger Williams, Rockwell, and Bourne.

Swope's suggestion for a class fund for the reunion is along the line of somewhat similar efforts at Princeton and in the various fraternities.

John Whorf, son of Harry Whorf, '95, is repeating his remarkable success of last winter when he sold fifty-two of his paintings at the opening of his first exhibition. His oils and water-colors may be seen at Miss Grace Horne's Galleries on Stuart Street, (Trinity Court), where the present exhibition is on until December 13.

Dr. Arthur Dean, Professor of Vocational Education at Columbia, is writing a series of daily articles on "Your Boy and Your Girl," which are syndicated and published in newspapers all over the country, and is now traveling about the country speaking on the subject of Vocational Education. He is the author of several educational works, including "Just Between Ourselves," published in 1923. A recent announcement of one of his addresses in Portland, Me., says, "The boy and girl instruction which Dr. Dean is at present giving through the great dailies of America promises to be one of the most noteworthy of his list of achievements."

The New York November Luncheon was called by Wiggin at the Technology Club on November 20. Wiggin, Claflin, Gardner, Canfield, Fred Cutter, Drake, Wolfe, Huntington, Swope, Gerard Matthes and Donham were there. The proposed combination of the Thirtieth Reunion with the All-Technology Reunion on June 11 and 12, extending class events over into the thirteenth and fourteenth was approved, and a plan presented by Swope for bringing out a record attendance from those living at a distance was discussed.

To talk over the Thirtieth Reunion and to meet Ben Donham, who was over from New York, an informal lunch was held at the Boston City Club on November 24. Booth stated that the dates selected by the Alumni Association were Thursday and Friday, June 11 and 12, so that '95 will celebrate the 13th and 14th. Frank Miller, W. D. Parker, and Barrows insisted that no Southern hospitality could beat the reception visiting classmates would get. Whorf and Andy Fuller called attention to New England possibilities for entertainment. Donham said he was good on clambakes and was sure the New Yorkers would turn out if they could have a chance to play golf. Louis Rourke and Gene Clapp got into a scrap about ways and means and a fund for the Thirtieth Reunion, but that

1895 Continued

means there will be somethin' doin' . . . and the President and Secretary of the class could hardly get a word in edgewise. Put down "June 11 to 14 in Boston" as an important appointment and plan your Eastern trip for the middle of June.

Frank A. Bourne, *Secretary*,
177 State Street, Boston, Mass.

'96

The New York Herald-Tribune for Sunday, October 26, 1924, contained a cut of Paul Litchfield who, as Vice-President and General Manager of the Goodyear-Zepplin Company of Akron, Ohio, Head of the dirigible industry in America, was the host at the dinner at the Waldorf Hotel in New York to the officers and men who brought the ZR–3 over from Germany.

The Secretary has been busy trying to secure addresses for lost men, the cause of this activity being the preparation of a new Register of Former Students of Technology which is under way and for which it is very desirable to have every address that can be obtained. Al Drum and Herman von Holst were reported missing, but Drum has been located as having moved his consulting office to 230 South Clark Street, Chicago, while von Holst has his architect's office at 72 West Adams Street, Chicago. Another man who has been lost is Alfred Victor Shaw, but this has become a habit with Shaw, on account of his nomadic temperament. We no sooner get an address for him in one place than we find that he has pulled up stakes and gone elsewhere. About a year ago he was around Boston, then he went to Colorado and then he disappeared. Even his own brother reports that he cannot keep track of him. The last word his brother had from him was that he was in Ketchikan, Alaska, but that he would probably be leaving there to go down the Pacific Coast very shortly. Shaw has a close connection with the magazine known as *Adventure*, and they keep in fairly close touch with him, so that it seems that the best address for Shaw is c/o *Adventure*, Spring and Macdougal Streets, New York City. In the cases of two men, our efforts have not yet been successful. One is George Lawson, who was located in New York for many years up to the time that we lost him; and the other is Allan J. Cameron, Jr., who came from Westford, Mass. If any classmate can supply a clue as to the present whereabouts of either of these men, it will be most gratefully received.

A letter from John Lonngren reports that he is now in Los Angeles and busily engaged organizing his new enterprise for the manufacture of wire and wire products in that city.

Frank Hersey reports that he has received a card from M. L. Fuller postmarked Alaska. Fuller and his wife were then starting toward home and it is quite probable that by this time they are nearing Massachusetts, even if they may not have already arrived here, although the Secretary has, as yet, received no word from Fuller. The chances are that for the next issue Fuller will supply a report of the last half of his year's trip, supplementing the report given last spring of the outward part of the journey.

The attention of classmates is called to the announcement just made of the All-Technology Reunion, to be held on June 11 and 12, 1925, and it is hoped that note will be made of these dates and plans made to be in Boston at that time.

Charles E. Locke, *Secretary*,
Room 8–109, M. I. T., Cambridge, Mass.
J. Arnold Rockwell, *Assistant Secretary*,
24 Garden Street, Cambridge, Mass.

'98

It is to be noted that the big All-Technology Reunion comes this year (Thursday and Friday, June 11 and 12). Ninety-eight will be there as usual and furthermore there will be some special events for Ninety-eight alone, of which due notice will come later.

A. A. Packard has been appointed Assistant Professor of Physics and Mathematics at St. Stephens College, Annandale on Hudson, N. Y.

Felix Porter dropped in the other day and reported that he has settled down on Fisher Avenue in Brookline, Mass. We reported not so long ago that he had retired from business and settled on a farm at Trevett, Maine. This proves not to be strictly true. The place at Trevett is only a summer place and he has not retired from business. Although after the big work he did during the War in making smokeless powder at the duPont plants he has enjoyed a well-earned rest from steady daily routine, he nevertheless retains his interests in the duPont Company and goes to the plants for consultations and whenever special need for his presence arises. He has joined two golf clubs around Boston and he is an enthusiast but he does not brag about his scores.

Seth Humphrey tells an interesting story of his year and a half of travel in the South Sea Islands. He has just finished writing a book on the subject, and we ought to see it in print before long.

Arthur A. Blanchard, *Secretary*,
Room 4–160, M. I. T., Cambridge A, Mass.

'00

An announcement of the 1900 Annual Fall Roundup with Barbecue, Bowling and Bull Throwing cluttered the morning mail of some fifty-five local men with the result that twenty-three bit hard and turned out to exhibit their prowess, each in his own specialty. They were Bert Allen, Inky Bowditch, Ed Brigham, Ed Bugbee, Francis Conant, John Conant, Burt Cotting, George Cutting, Wilbur Davis, George Emery, Stanley Fitch, Fred Ingalls, Wolcott Remington, Chet Richardson, Mort Silverman, Jimmie Burns, Fred Lawley, Charlie Leary, Walter Patch, Walter Dean and Russ.

Dean came all the way from Washington, D. C., and brought with him his son, Walter, Jr., who is entering the 'Stute this year as a freshman. Dean is still connected with the Navy Department as Electrical Aide in the Department of Construction and Repair, and as such was up in this District to be present at some speed trials. It was his first appearance since the old days and it gave every man present real pleasure to have him back. He was just the same old boy and you fellows in Course VI who knew him well can picture him today as the Dean of yesterday.

The social gathering that preceded the feed was a good beginning for the evening's fun. As a side-show, Fred Lawley and his old side-kick, Charlie Leary, blew in. Leary seemed very little changed, but there is something funny about the close relationship between opulence and corpulence. That fellow Lawley is just getting sleeker and stouter every year. Doesn't seem to know any limit.

After the dinner had been put out of the way and cigars lighted, the subject of our Twenty-fifth Anniversary was brought out and generally discussed. It didn't take very long to find out that everybody was red-hot for a big reunion, and an informal vote showed every man present would attend the event if he had to eat at a one-armed lunch for a year afterward. Russell outlined the recent reunion of '93 and suggested that a committee be appointed to arrange for a similar but more eclipsing event. This was enthusiastically approved and resulted in the appointment of Allen as chairman and in charge of publicity. Fitch was recognized in his financial capacity and put at the head of a committee on finance. In order that nothing should be lacking to insure a corking time, Zeigler was commissioned to head a committee on entertainment, and it will therefore be unnecessary to insure the affair with Lloyds. Burt Cotting was unanimously chosen to take care of the sports (referring to athletic games, etc.) and those who recall his ball tossing proclivities of 1896 will know that fun will reign supreme from the drop of the hat to the award of prizes. Bowditch's ability to borrow other people's automobiles made him without a competitor in the field when it came to picking a chairman on transportation. None will have to worry about getting there. Russell, by reason of his office, was attached to the committee as a sort of water-boy. There was some talk of putting Mort Silverman in for this job, but at the last moment it was suggested he didn't know enough about that particular job and it wouldn't do to get the drinks mixed. Just to show that it was a real hustling committee, this bunch got together the very next day at lunch at the Chamber of Commerce and proceeded to get busy. Jobs were found for everybody. Among other things decided, it was voted that the reunion should be a real family affair to which all the men who were so blessed could bring their wives. With this in view, a second meeting, held at Allen's home, was made to include the wives of the committee who promptly organized to insure this phase of the affair a success.

It is a little early for announcing definite plans but we can say it is to be a real party. It will probably be held down on good old Cape Cod sometime in June, and will last about three days. The All-Technology Reunion is scheduled for the 11th and 12th of June, with Class Day and Graduation the 15th and 16th. It would seem as though the 8th, 9th and 10th would be the preferable dates as the men coming from a distance would then be able to make a real vacation of it and take in all the events. The committee will soon inaugurate a series of announcements to appear from time to time, and every son of 1900 will be kept on his toes from now on. It will be a real hum-dinger! Every man at the Roundup pledged his support and already the Finance Committee has received assurances that there are men ready to underwrite the whole affair. So save up and be prepared to hit the trail when the pipes sound the gathering of the clans.

The discussion of reunion plans did not constitute the whole of the evening's fun at the Roundup. We adjourned to the alleys in the basement and again demonstrated our prowess at the game. All that can be said is that as bowlers we would make good marble players, save that Conant, Emery, Lawley and a few others did pull off some stuff that really frightened the pin boys.

The following letter from Fitch came in a few days ago in answer to an appeal made by the Secretary at the Roundup: "In response to your appeal at the recent class gathering for letters regardless of their contents, I am fulfilling my promise to write to you. My last communication resulted in some valuable publicity through your column, in which my name was linked with Dick Wastcoat. Dick, however, has nothing to do with what I am about to say.

"You are the only publicity agent on my payroll and The Tech-

1900 Continued

nology Review is my only successful medium. You may have noticed that for some time I have carried a professional card under "A Directory of Technology Graduates and Other Qualified Engineers" at the back of the magazine. Futhermore, my firm was engaged last year to audit the accounts of the Treasurer of the Institute, which fact any interested party can confirm by referring to the printed report for the Treasurer for the year ending June 30, 1924. Perhaps my good fortune is only a coincidence, but nevertheless you and The Technology Review can take whatever credit belongs to you as advance agents of my enhanced prosperity.

"You personally may be interested to know that at the last annual meeting of the Massachusetts Society of Certified Public Accountants I was elected President of the Society, as appears at the top of this letterhead.

"I should much prefer to write you about somebody else, but have heard nothing especially interesting, except of Fred Lawley, whose recent exploits are about to be chronicled by another scribe better qualified to expose the source of his ill-gotten wealth."

Fitch's letter is upon the letterhead of the Massachusetts Society of Certified Public Accountants of which he is not only the President but Chairman of the Executive Committee.

Last summer when the days of the New York Democratic Convention were approaching, the writer happened to run into Burns. Jim has been for some time Assistant Engineer with the Transit Department of Boston, but has always found time to indulge in his hobby of politics. In fact, he found time to serve in the State House of Representatives and by his good work earned the confidence of his constituents. At the time mentioned he was a candidate for the State Delegation to the Convention and he promised the Secretary to faithfully report the convention, if elected. Just recently we have extracted from him an account of that historic struggle which, if given to the press at the time, would have made good copy. Jim tells it just as he saw it and it's too bad it couldn't have appeared in the columns of the November Review. He reports having run across many Tech men while in New York.

George E. Russell, *Secretary*,
Room 1–272, M. I. T., Cambridge, Mass.

'01

On December 10 at the Engineers' Club at the hour of six-thirty the Class of 1901 held an informal dinner to discuss the details of the proposed anniversary. Notices were sent to all of the greater Boston alumni. While the anniversary this June will be our Twenty-fourth and not the conventional Twenty-fifth, we feel that the principal thing is to get the men together, and by having our anniversary in connection with the All-Technology Reunion this pious aspiration may be realized. Everybody, please notice.

Early in the year I received a missive from Fred Freeman, which, welcome in its content, as Fred's infrequent missives always are, contained an additional source of pleasure in a portrait of the writer. So happily was this drawn, so characteristic is the expression, that I can not deny the privilege of showing it to the other members of the class. With the connivance of the Editor of The Review, I am offering the precious opportunity to all subscribers. Truth compels me to state that Fred had sketched on the envelope an alleged portrait of myself, but the twenty years which have elapsed since last we foregathered have produced in me a hirsute arrangement quite other than that portrayed. Regrettably it is quite unrecognizable, although as a fancy picture it enjoys that delicate charm and evanescent beauty which distinguish the products of Fred's facile pen.

On another sheet and somewhat less legibly Fred writes that he is General Manager and Agent of the Windham Mfg. Co., and as an avocation is cartoonist of the *Portland Evening Express*. He is poignantly solicitous concerning the whereabouts of Al Higgins, the strawberry king, — a solicitude that I assuaged to the best of my ability.

Fred Clapp has turned up in a new part of Australia with the following interesting letter which I quote (almost) verbatim: "For the past six months I have been in Australia, engaged in exploration of unknown regions. Although this is in my capacity as petroleum engineer, I am, nevertheless, seeing much of interest from a human point of view. I find the Australians agreeable and industrious and am hospitably received wherever white men live.

"Much of the time has been spent in the northern part of the so-called Great Plateau of Western Australia, which is covered with vast stretches of sand hills and is considered as desert, although supporting scant vegetation. The area in which much time has been spent has seldom been visited by white men, and, in fact, a region 100 miles in diameter (never visited by whites) has been penetrated to the center. Wild black men live here from time to time, but few were seen and it is probable that they moved to more attractive localities on account of the lack of surface water, of which there is now none for 100 miles, the year having been the driest on record. There are of course no wells and the 'rock-holes' are now practically empty of water which they usually carry.

"The expedition was made in caterpillar tractors having rubber bands and much greater progress would have been made had the machines and bands been suitable for the sandy conditions. As a matter of fact, the expedition reached a point 190 miles southeast of Broome, beyond the Eighty-sixth Sandridge and not far from the McLarty Hills as mapped. Much was achieved in a geological and geographical sense. The explorations continue to the south and southeast at points on the borders of the desert that can be reached by automobile and inside the desert where they must be reached by camels." Freddy's life certainly is not one of a cloying monotony.

Bill Pepperell writes in from Providence ostentatiously indicating that he is now living at 144 Prospect Street in that town. He is

1901 Continued

Assistant Treasurer of two Corporations and President of a cotton mill waste company with several plants in Massachusetts and Rhode Island. He is also Secretary and Treasurer of the Southern N. E. Textile Club. As one remembers the solidity of Bill's figure, it is not surprising to find him in these various positions of trust. Bill writes that he has been making a special study of the tariff on textiles and is a member of a National Committee representing the textile industries. This means, I presume, that sooner or later Bill will be translated to Washington, where so many other good '01 men go. Bill is planning to take in the anniversary on his way to or from; he cannot yet decide which.

J. E. Ober is Treasurer of the West Pennsylvania Steel Co., and President of the Harrison Land Company. Under "interesting news" he states that he is enclosing check for class dues. God knows we are not as sordid as that would seem to imply. Ober is uncertain but now thinks it probable that he will attend the reunion.

Billy Holford who is in parternship with Ellis Lawrence in Portland, Ore., is still practicing his profession as architect. When asked to reply to the query of his occupation in detail he states with mordant pessimism that the choice of the word "detail" is particularly happy. Some of the details that he mentions in his elaboration of the theme sound somewhat intriguing to the layman. With the censorious eye of the Editor subsequently scanning this screed I must omit the suggestive details of these details. Former friends of Billy can fill in my enforced omission in detail. Although Ellis revisited the East last summer, both he and Billy are planning to participate in every detail in the forthcoming reunion. The Secretary will have a few minor details of amusement to offer them both.

Norman Skene continues as naval architect with Burgess, Swasey and Paine. Norman is living in Bedford, which, after all, is not far from Boston. He plans to offer an aquatic detail as one of the highlights of the reunion. We are searching for volunteers for a three-banked galley.

Frank Holmes is still curtailing certain of the activities of Freddy Boyd, they being jointly the Power Equipment Company of Boston. Frank says that his principal avocation is entertaining visiting members of the class and on the roll of the pilgrims I find Al Higgins, Perk Parrock, himself no longer a wanderer but an inmate, and one Philip Wyatt Moore, the aristocratic denizen of the proximal end of one of Chicago's most exclusive private roads. Frank states that the latchstring is always out, that the room is No. 1014, and the building 131 State Street. From the warmth of the welcome which I myself have enjoyed there, I can assure prospective visitors that this is a real offer.

Blauvert is one of the many members of this class connected with the American Tel. & Tel. Company. His headquarters are in the imposing structure at 195 Broadway and he is associated with the Department of Development and Research.

Since my last writing no changes of address have reached me. By indirection this bespeaks a solvency of the members of the class that is most gratifying. It would seem to be a psychological time to suggest that we are holding an anniversary in connection with the All-Technology gathering next spring. I shall be glad to furnish details on request.

Allan Winter Rowe, *Secretary*,
295 Commonwealth Avenue, Boston, Mass.
V. F. Holmes, *Assistant Secretary*,
131 State Street, Boston, Mass.

'02

Julius Alsberg has moved to New York, his address there being 23 East 31st Street. This address came in so recently that we have not had time to get particulars as to Alsberg's business interests in New York, but we hope to report these next month.—Bobby Pope's New York address is 36 West 44th Street. His cousin, Harold Pope, has moved to 130 Edgemont Road, Upper Montclair, N. J.—Robbie has picked out an address particularly appropriate, as he is now living at 32 Robin Road, West Hartford, Conn.

Plans are being made for a class outing next June on Saturday, the 13th, and Sunday, the 14th, following the All-Technology Reunion to be held at Cambridge, and Nantasket, on Thursday and Friday, the 11th and 12th. More details will be broadcast in due course, but classmates are warned to note the dates and "stand by" for further orders.

Frederick H. Hunter, *Secretary*,
Box 11, West Roxbury, Mass.
Burton G. Philbrick, *Assistant Secretary*,
276 Stuart Street, Boston, Mass.

'04

The Secretary wishes to extend to his classmates the compliments of the season. It is his earnest hope that all have experienced a very Merry Christmas and that the New Year just opening may be very happy and filled with prosperity.

1904 Continued

The notes available for this issue are practically zero. It is the Secretary's intention merely to produce a few sentences which shall serve to prevent the notes from the following class being merged with those from the class in front. In other words, he is trying to "make something out of nothing or fill space with a vacuum." The quotations are from an appreciation received from Joe Crowell last spring.

It has been decided to hold an All-Technology Reunion on June 11 and 12, 1925. As these words are written, the preliminary announcement has just been received, and the Secretary assumes that there may be more regarding this event elsewhere in this issue. If there is not, this will serve to set you all thinking about it. The connection between the Annual Class Reunion and this All-Technology affair is undetermined at present, but the matter will receive careful attention and thought and will be the subject of further announcements.

There has been a concerted effort made recently to increase the membership of the Alumni Association. Again the Secretary is uncertain as to whether this issue contains any information regarding the subject, but a few figures may do no harm.

Of the total eligible to membership, only about twenty per cent are members of the association. Our class has an eligible list of four hundred and fifty-six, according to advice from the Alumni Office. As these words are being written, eighty-four, or approximately eighteen per cent are members and hence are readers of these notes.

The Secretary was somewhat astonished to learn of this low percentage. It is to be hoped that the drive for members has borne fruit and that this issue will be perused by many more members than in the past. The Secretary would like to make this column the official means of communication with his classmates and he hopes that this result may come about sometime in the future.

In closing, the Secretary wishes to acknowledge with profound thanks and appreciation a communication from Charlie Haynes and to venture, timidity and unexpectantly, to hope that some other classmates will emulate his noble example.

Henry W. Stevens, *Secretary*,
12 Garrison Street, Chestnut Hill, Mass.
Amasa M. Holcombe, *Assistant Secretary*,
3305 18th Street, N. W., Washington, D. C.

'05

Charlie Starr had been so long in the army that we thought him a fixture, but recently he came to the conclusion he would rather have less gold on his coat and more in his pocket and moved from Washington to Chicago which, you may remember, will some day be the national capitol, according to George Jones. He writes: "As to news regarding myself, the enclosed reprint of an article concerning Veterans' Hospitals designed in the office of the Quartermaster General will indicate the work I had charge of during the last two years. In spite of all the scandal which was broadcast in the newspapers, there was a lot of good work done in connection with building Veterans' Hospitals. I was connected with a part of it and happen to know that some of the construction contracts that were heralded as improper, were absolutely O.K. In any event, it was very interesting to see the hospitals grow from picking out the site to turning them over to doctors to run.

"I left the Government Service the first of last May and spent two months wandering abroad before coming here with Schmidt, Garden & Martin. I had a most interesting trip across the 'pond';—visited France, Switzerland, Italy, Germany, Belgium, Holland and England, at least the high spots of those countries.

"For the last ten years, my work has been more particularly in connection with hospital construction and, as Schmidt, Garden & Martin are better known for their hospital work, I am continuing in that same line.

"I have not been in Chicago long enough to get in touch with Tech men particularly, but hope to do so soon. I suppose we will have a special reunion next year, being twenty years out. Looking back on twenty years certainly is different than in looking forward, for it only seems a short time ago we strutted out of the Institute ready to conquer the world."

The article, by F. Charles Starr, Lieutenant Colonel, Quartermaster Reserve Corps, is an interesting description of the new three hundred-bed neuropsychiatric hospital at American Lake, Washington, designed and constructed by him. We are glad of the additional assurance that the scandal was greatly overdone.

Having had some trouble locating Bob Wise, we appealed to Starr who, in Thesis, had joined with Wise in the pursuit of an elusive module which they captured and had stuffed. Starr said he had quite forgotten about the module but reported that Wise was a member of the firm of Cramer, Bartlett & Wise, Architectural Engineers, 124 W. 4th Street, Los Angeles, Calif.

Just as though he thought it necessary to offer some evidence to support his story in the November Review, Harry Wentworth sat down on the rail at a flag station somewhere north of Hudson's Bay and wrote: "It is restful and peaceful enough here. Two houses and two stores make up the town. The work going on is 12–20 miles south and I came up yesterday with a 35-lb pack, 16 miles through swamp and over fallen timber on a poorly cut out trail, the end of a 70-mile hike in 5 days. Since the first of June (written in July) I have travelled 2800 miles on train, 230 by power boat, paddled 185 in canoe and tramped 190, mostly with pack — and heavy at that — which gives a fair idea of this kind of life in the north country. Bread and bacon, then bacon and bread, then toast and bacon, then bread soaked in bacon fat, then rice with no milk, then rice with bacon fat, ad infinitum (plus tea, made up here so that a spoon won't sink in it). It would do the average city man a world of good to get so that he *looked forward* to a 'feed' of dry banick (unraised bread) and bacon, three times a day. Usually we have more grub than this, but often this is all we have for a couple or three days at a time."

And then he shows how he spent the last thirty-six nights: sleeper 4; tent 7; hotel, good and bad, 13; sat up in power boat 2; house 2; barn 1; log cabin 7.

Who said Hallett Robbins was the great traveller? Not only has Harry outdistanced him but did it on foot while H. R. travelled

1905 Continued

in luxury. But the life certainly agrees with Harry, who doesn't look a bit frazzled.

You have just listened to Harry Wentworth speaking on Hiking through Canada. The next on our program will be a short talk by Edward Church Smith on the Eveready Battery. Mr. Smith: "Well, I am still in Fremont, where I came soon after leaving Tech, though for six and a half years I was located in Toronto, Canada, with a branch of the National Carbon Co., Inc., for which I am still working.

"At present I am in the Development Department of the Research Laboratory, busy with problems concerning the quality and improvement of Columbia Dry Cells and Eveready Flashlight and Radio Batteries. We are making radical improvements, and if you or any of our good classmates have had trouble with our goods, take courage and try them again, for we are improving the quality right along. We are just now engaged in developing an entirely new type of "B" battery which should be a world-beater if our luck is with us.

"As a side-line, by way of avocation, during the past twenty years I have been engaged with my brother in writing the history of the town of Middlefield, Mass., which we hope will be of interest to people who delight in local history and genealogy."

Bob Lord and Grove Marcy have been in keen competition the past summer in the apple raising industry, Bob eagerly pursuing the borer on the ancestral farm in Maine (an eyewitness says it is unbelievable how far he can follow a borer into a tree) and Grove spending his week-ends spraying everything in sight on his recently acquired Air Cooled Farm, at Franklin, N. H. Although Bob has been at it continuously, except for a few years when he was canning corn, ever since he planted the orchard one Christmas vacation at Tech, and Grove was for the first time playing the rôle of the gentleman farmer, the official score is: Lord 10 bbls., Marcy 1000 bbls.

Rather a coincidence that our only two living ex-secretaries should both be in the apple game. Wonder if every '05 secretary goes into orcharding! Fact is, the present Secretary is moving shortly to a property on which is a thriving orchard — one pear tree. Thus are we true to form.

Elliott Lum is a hard one to follow. He reports as follows: "For your information, I am no longer in Nashville, but have been transferred and am now Manager of the Western Electric House at Columbus, Ohio. Have been all over the country since leaving Tech, most of the time being spent with the above company in the Middle West. Have been working East lately, however, and am now within striking distance of Boston. When you spoke of next June being our Twentieth, it made me feel rather ancient. While the hair is getting a little thin, I have refused to feel any older and am still 'fat and sassy,' but seriously about the Twentieth, I will give it consideration and trust and hope to see you and the rest of the boys at that time."

Eugene Kriegsman's address should be revised to read 2889 Francis Avenue, Los Angeles, Calif.—Carl Danforth came down from the State of Maine not long ago and appeared at a class luncheon with Billy Ball.—Bill Green has moved his family to Gloversville, N. Y., where he will be for the present, associated with his brother in the manufacture of leather gloves. —Ned Jewett has been located in care of H. L. Stevens & Co., 522 Fifth Avenue, New York. The firm is building an addition to the Bancroft Hotel, Worcester, where Ned goes frequently. He promises to run over to Boston soon and we shall expect to hear more of his recent activities.—Casey Turner so enjoyed the Alumni Convention in Detroit that he threatens to be the first to arrive at the class reunion.

From the *Boston Globe* we learn that: "At the convention of the International Mail Advertising Service Association, in Pittsburgh, Charles W. Hawkes, Manager of the List and Letter Service Department of the Sampson & Murdock Company of Boston, was included in the association's directors elected for the ensuring year. Six or eight years ago Mr. Hawkes organized the Mail Service Association of Boston, which is now affiliated with the national organization. He has been Secretary-Treasurer of the National Mail Advertising Service Association, and also its Vice-President.

Dennie of the Alumni Association is getting after us secretaries to help increase the class representation in the association. On the last report, '05 stood sixteenth out of fifty-seven classes. Our percentage was 24.2. Apparently these notes will be read by only 129. An appeal in these columns would be futile, but we ought to increase our quota. It seems as though we'd have to assemble another *Flivver*, or appeal to Charlie Hawkes' Mail Advertising Service.

Roswell Davis, *Secretary*,
19 Thorndike Street, Beverly, Mass.
S. T. Strickland, *Assistant Secretary*,
26 Pemberton Square, Boston, Mass.

'06

No notes have been received by The Review Editors from the secretaries of this class for inclusion in the January issue. The Secretary received the usual notification that copy was due, accompanied by such news as had been compiled in The Review office. Members of the class having news or inquiries should address them to J. W. Kidder, Secretary, at 50 Oliver Street, Boston, Mass., or Edward B. Rowe, Assistant Secretary, 108 Water Street, Boston, Mass.

'07

Parker Dodge has saved the day for our class notes for this issue by sending in his usual thoughtful way the following extracts from a letter which he received from Jim Barker who is Manager of the First National Bank of Boston at Calle Florida, Buenos Aires, Argentina, South America: "Well, we did have a vacation in January. The Hamburg-South American Line took one of its 25,000 ton liners and ran a three weeks' cruise to Tierra del Fuego and around Cape Horn. We two dropped everything, house and bank, and packed up and went. I had to review my geography, I must confess. They took us down to lower Patagonia, where the greatest of the Argentine oil developments is taking place, and then down into the Strait of Magellan to Punta Arenas, which I found was the world's southern-most city, a brisk and enterprising town — in great part of sheet iron and with a coal mine in its backyard. Then we went halfway through the straits, doubled back, and sailed down into the glacier flanked channels of the Tierra del Fuego archipelago, where we wound and twisted, eventually sailing around the cape itself — a real experience. The photograph which I enclose looks tame enough, but in reality there was a wild, westerly gale, with driving mist and rain every few minutes, which gave me a good idea of how tough an experience it must have been for a sailing ship. We were in the channels about ten days, going ashore in many places and getting a chance to see the flowers and what little animal life there is. I was amazed at the glaciers, for I had only seen them at the great distance from which you view them on the higher peaks of the Andes, further north in Chile and Peru.

"The climate is generally atrocious while you are in the midst of the islands, rain every half hour or so, but as one gets south into the Beagle Channel of Darwin fame, it is better. There are few birds, though in the woods you come across occasional flocks of green parrokeets. In one place we landed and climbed a mountain. The antarctic forest at the base was almost impenetrable; gnarled and stunted beech trees with extended roots covered everywhere with moss. We found a brook and climbed through the bed of it to above timber line, which in that latitude is only a few hundred feet up. We came out then into an upland meadow covered with thick grassy moss, or better, mossy grass, a mattress into which one's feet sank ankle deep, water-logged like a sponge.

"The climb was hard, but worth it. With every foot of elevation gained, new snow-clad peaks rose from behind the foreground with every valley filled with deep blue glaciers. The late sun did not set until about 9:00 p.m. and we explored for miles along an upland plateau to a small isolated peak in it which gave a view back through the channel to the Strait of Magellan and to the continent beyond. As you go south, with the somewhat milder climate along the Beagle Channel itself, you come to a couple of small settlements, one the Argentine government penal station for life prisoners on the mainland of Tierra del Fuego, (Ushuaia), and the other Harberton, the center of an important sheep-raising industry. As we walked along the shore here we found one of the enormous vertebræ of a whale, a relic of the old days when they were plentiful here, and in another place we explored the aboriginal kitchen middens and found among the mussel shells which formed the principal part of the Indian dietary the bones of seals and sea lions and again whale vertebræ.

"The Indians, of which only a few are left, were of the lowest civilization, without utensils worthy of the name and practically naked even in that rigorous climate. If you have read Darwin's "Voyage of the Beagle" you have the picture of things as they were then and almost as they are today, grandeur of scenery although bleak and forbidding to the utmost, and utterly desolate. We found some interesting flowers, a beautiful flame-colored creeping lily called 'Magellan's Lily,' and many varieties of orchids which neither M. [Mrs. Barker] nor I had ever seen anywhere before. Fortunately we had a botanist aboard who had spent several months in the archipelago years ago and who had witten a book in *Latin* on the flora of Tierra del Fuego.

"Rounding the Horn was probably the most interesting single bit of the trip, for now-a-days almost no one ever sees it. Sailing ships which go around always keep well to the south out of sight of land, and steamers go by way of the Strait of Magellan. We passed it at 8:30 of a typical antarctic morning with a westerly gale driving the showers past us at a fearful rate, and now and then whipping the clouds away from its rocky base, but never from the peak itself. A few straggling bits of green could be seen with the glass, clinging to the precipitous slopes and covered with the driving spray from the breakers. No wonder the sailing ships feared it.

"The trip was doubly interesting for us because in August we had taken a special excursion to the northern Argentine provinces as the guests of the Argentine government. That was a different experience, you can imagine, for the Argentine to the north extends well into the tropics. But I have written enough and shall save that for another story."

Not a single other item of interest regarding '07 men has come to the attention of the Secretary since last month.

Bryant Nichols, *Secretary*,
2 Rowe Street, Auburndale, Mass.
Harold S. Wonson, *Assistant Secretary*,
W. H. McElwain Co., Manchester, N. H.

'08

The first get-together of the fall was held at Walker Memorial on Tuesday, November 11, 1924, at 6:30 p.m. Bert Cary had agreed to give a talk on "Freak Patents" and this attracted quite a crowd. Dinner was served in the Faculty Dining Room with the following present: P. L. Handy, F. T. Towle, Leslie B. Ellis, Herbert Gerrish, P. J. Hale, B. W. Cary, W. E. Booth, R. E. Manning, Robert B. Todd, J. W. Wattles, 3rd, G. E. Freethy, A. W. Heath, Myron M. Davis, William Medlicott, E. Jefts Beede, L. T. Collins, A. M. Cook, A. B. Appleton, and H. L. Carter. A short business meeting after dinner was followed by a most interesting illustrated talk on patents in general and freak patents in particular by Cary. Much obliged Bert for a most enjoyable evening.

Marshall Field, Glore, Ward & Company, New York, announce that Henry R. Putnam is now associated with them in their department for purchase of securities.—Mr. and Mrs. James William Caldwell announce the marriage of their sister, Miss Agnes Cady, to Mr. Scott MacNutt on Tuesday, the twenty-seventh day of May, one thousand nine hundred and twenty-four, Saint Louis.—The marriage of Mrs. Helen Sargent Cottom, daughter of Mr. and Mrs. Charles Henry Sargent of Dorchester, to Herbert Lawrence Fletcher of Lawrence and Scituate took place at 501 Talbot Avenue, Dorchester on May 21, 1924.

Cub Folsom, for many years Chief Sanitary Inspector for the City of Cincinnati, Ohio, has recently accepted a position as Chief Sanitary Engineer for the City of Miami, Fla.—Tim Collins formerly of Bradshaw, Collins Company has recently opened offices in Boston under the name of Le Seur T. Collins dealing in securities.—Russell T. Hyde of Waltham, Mass., has recently become Assistant Professor in the Department of Architecture at Carnegie Institute of Technology.—Dr. Charles A. Kraus, Professor of Chemistry at Brown University, was awarded the Nichols Medal given annually by the New York section of the American Chemical Society for the "research published during the year which in the opinion of the jury

1908 Continued

is the most original and stimulative to research."—Mrs. (Elizabeth Stone) MacDonald has joined the staff of the Middlesex County Extension Service. Mrs. MacDonald is well known in connection with her work for the Modern Priscilla Proving Plant at Newton Center.—P. J. Hale is now back in Boston after many years in the West. He is connected with the Mystic Iron Works.

It is with the deepest regret that we announce the death of Herman Carsten Schriefer at Boston, Mass., and of J. Hardy Bossong at Birmingham, Ala.

The next bi-monthly dinner will be held on Tuesday, January 13, at 6:30 p.m., at the Walker Memorial. Toot Ellis is planning to give us a talk regarding conditions affecting the textile situation in New England, which will be very interesting to all. We hope for a big crowd, even larger than last meeting.

Harold L. Carter, *Secretary*,
185 Franklin Street, Boston, Mass.
Lincoln T. Mayo, *Treasurer*,
181 Massachusetts Avenue, Boston, Mass.

'10

Notes have been pretty scarce around here for some time which has been the occasion of a good deal of criticism. We know that our classmates are "cussing out" the Secretary and Assistant Secretary; in fact, they have been doing everything but writing to them. If you'd only write in your complaints, we'd at least have those to publish.

Well, in the absence of any letters, we'll do the best we can, so here goes. Dick Bicknell was in Boston for a visit the other day. He is President of the New Process Acid Company of New York, and also doing consulting engineering work on the side. He says that McMurtrie is doing great things as Sales Manager for the Conde Nast Publishing Company. Mack has invented a new style of type and is doing some of the fanciest printing and publishing work in the country.

Herb Cleverdon reports that architecting is pretty good these days. He has to work himself three shifts most of the time he has so much to do, and has just blossomed out by buying a new home in Newton. Hal Billings is pretty busy too in contracting work. He did a small job in East Cambridge and dropped in to see me. He is finishing the station at Springfield, which was quite a big job.

Your secretaries have decided to bring up the question of the Fifteenth Reunion next June at the Annual Alumni Banquet in January. At this time plans will be discussed, the question of the most convenient dates brought up, and a committee will be appointed to go ahead with the arrangements. It is hoped that as many men as possible will attend the Alumni Dinner.

Remember that the class notes depend on you, so take your pen in hand or your typewriter in your lap and get busy.

Dudley Clapp, *Secretary*,
40 Water Street, East Cambridge, Mass.
R. O. Fernandez, *Assistant Secretary*,
264 West Emerson Street, Melrose, Mass.

'11

Word has reached your Secretary only this month (November) of the death on February 11, 1922, of Henry W. Stucklen, X, at Mont Vernon, N. H. Universally known as Heinie he was a most popular member of our class and his loss is keenly felt.

With great joy announcement is made of three more junior Eleveners: Mr. and Mrs. Henry Dolliver of Belmont, Mass., announce the arrival of June Burnham on June 3; Mr. and Mrs. M. E. Comstock of West Medford, Mass., the arrival of Charles Marshall, nine and one-quarter pounds, on October 9; and Mr. and Mrs. Harold S. Lord of Hartford, Conn., that of Ann Flint on November 17.

As announced in last month's Review the usual celebration on the eleventh evening of the eleventh month for Eleveners was held this year at the Walker Memorial, M. I. T., Cambridge. There were nineteen of us at dinner and the outstanding feature was the "talk around" during which each man present gave a short sketch of his career since leaving Tech. Here's how the dope was presented: Tommie Haines, II, married, two children, with Edison Company of Boston ever since graduation.—Jack Herlihy, II, three children, like Tommie he is with Edison Company of Boston since graduation.—Dennie Denison, VI, married, three children, successively with American Steel & Wire Company and the Norton Company at Worcester, Mass., and Simplex Wire & Cable Company at Cambridge, Mass. Now (since July, 1923) Executive Secretary of the M. I. T. Alumni Association.—Ted Van Tassel, X, married, two children, in leather business ever since graduation, centering at Stoneham, Mass.—Emmons Whitcomb, X, married, one child, with Raymond & Whitcomb Company, Boston, travel specialists, ever since graduation.—Johnnie Bigelow, IV, married, one child, in architecture with J. William Beals Sons, Boston.—D. J. Smith, V, single, with Revere Sugar Refinery as chemist ever since graduation.—A. H. Whorf, III, married, no children, mining in the West for six months and since then back East, with the Hood Rubber Company, Watertown, Mass.—Phil Kerr, II, married, three children,

1911 Continued

successively with Pennsylvania Railroad, Goodyear Tire & Rubber Company, Technical Section of Air Service, Baltimore Children's Garments Company, Milford (Conn.) Electrolytic Iron Company, Stone & Webster Company, Boston, and now with Jackson & Moreland, consulting engineers, Boston.—Ted Parker, I, married, two children, first came back to Tech as a civil engineering assistant, following which he went to Utah on hydro-electric work. After three years in the Army he joined forces with Stone & Webster in Boston, where he is now employed.—Gordon Wilkes, II, married, two children, since graduation in the Industrial Physics Department at M. I. T., now holding a full professorship.—Joe Fuller, II, married, two children, successively with Union Bag and Paper Company, Hoosic Falls, N. Y., General Bakelite Company, Perth Amboy, N. J., Gas Defense Division, back with Bakelite, and now with the Northern Industrial Chemical Company of Boston, in which business he now has an interest.—Oberlin Clark, II, single, started with American Writing Paper Company in Western Massachusetts and later joined the Army. Since the War he has been doing contracting business for himself and two months ago joined an architectural concern known as Clark and Smith, Inc., in which Ernest Batty is a partner also.—Ernest Batty, II, married, one child, like Clark started with American Writing Paper Company, following this with work as an instructor at the Lowell Textile School, then with J. P. Coats Thread Works and finally with Clark in architectural work.—Suren Bogdasarian, IV, single, has been engaged in structural steel engineering work ever since graduation and is now with Stone & Webster in Boston.—George Cumings, VI, single, started out with several electric light companies successively and finally went into the Electrical Engineering Department of the Fore River Shipbuilding Corporation. Is now with New England Telephone and Telegraph Company in Boston.—Art Leary, XI, single, started out specializing in plumbing supplies and drifted into construction work. During the War and thereafter was at Fore River plant, until recently when he accepted a teaching position in the Mathematics Department of Boston English High School.—Henry Dolliver, I, married, two children, has been in the building construction game ever since graduation, for ten years with Aberthaw Construction Company of Boston, then for a little over two years with a construction company in Connecticut, and at present with Morton C. Tuttle, Inc., Boston.—Art Coupal, II, single, was in shoe manufacturing for three years and then operated a machine shop for four years. He was in the mining game the following three years and now is with Aberthaw Construction Company, Boston.

After dinner the party gathered downstairs in the bowling alleys where a little first-class bowling and much kidding was in order. Ted Parker ran away with the honors, with a single string of 104 and a three-string total of 273, while Dennie easily captured the boobies with a single string of 49 — count 'em — 49, and a three-string total of 192.

Please take immediate note of a correction to be applied to last month's 1911 notes. In the second paragraph I said that Kes Barr was "still going big with the Youngstown Sheet and Tube Company out in Ohio." This of course was gross carelessness on my part, for I know perfectly well that the company Kes has been and is with is the Lumen Bearing Company at their Youngstown plant. Pray pardon this mental aberration, Kes.

A. T. Cushing, I, writes in that he is associated with Hermann C. Henrici, '06, a fine fellow and member of the firm of Henrici-Lowry Engineering Company, Kansas City, Mo., in making appraisals of the stockyards of the country. Headquarters are in 402 Security Building, Kansas City.

M. A. (Aurora Borealis) Grossman, III, has left the Atlas Steel Corporation, Dunkirk, N. Y., to join forces with the United Alloy Steel Corporation at Canton, Ohio.

In expressing his inability to attend the famous 11–11–11 Dinner, Stan Hartshorn, X, wrote down from Gardner: "A little work, a little play (golf).—Got to vote for Coolidge tomorrow.—Got to move next month.—Hope to see you all at the alumni banquet in January."

The following clipping from the *Baltimore Sun* for September 16, concerning our good friend and classmate, Bancroft Hill, I, is mighty interesting to us Eleveners and we are proud of our classmate:

"Bancroft Hill yesterday resigned as Harbor Engineer. The resignation was accepted, to take effect at once, and Mayor Jackson appointed Frank W. McKinney acting Harbor Engineer. Mr. McKinney was Mr. Hill's assistant.

"The Mayor said Mr. Hill would continue as consulting engineer to the board and also as chief engineer of the Port Development Commission, but without compensation, except in cases where special work was required. Mr. Hill offered his services to the Mayor in a consulting capacity if agreeable to the Harbor Board and the Port Commission.

"It developed that in a letter to the Mayor, September 2, Mr. Hill asked to be relieved 'of the responsibility of the detail work as Harbor Engineer.' He said he wanted to be free to devote his entire time to private practice. But Mr. Jackson said he held the letter in the hope that Mr. Hill could be induced to reconsider. Mr. Hill called at the City Hall yesterday, however, and asked that he be relieved immediately.

" 'Mr. Hill is very busy with private work,' the Mayor said. 'He is engaged in the valuation of the property of the United Railways in the fare increase case and he told me he did not feel that he should also be connected with the city. As a matter of fact, Mr. Hill did not want to be reappointed Harbor Engineer when I decided on my department heads, but I prevalied upon him to accept.'

"The Mayor recalled that Mr. Hill several months ago asked to be relieved of the detail of the work as Harbor Engineer and that it was agreed at the time that Mr. McKinney should take charge of the department at an increased salary, part of which was to be taken from Mr. Hill's salary. But instead of acting as consulting engineer at reduced pay, Mr. Hill continued in full charge.

" 'The time now has come when I must quit altogether,' Mr. Hill said, as he was leaving the Mayor's office with a letter accepting his resignation. 'I will be glad, however, to help the Mayor and the city out whenever I can.'

"Letters announcing the resignation and his acceptance of it, to date from September 15, were sent by the Mayor to the Harbor Board and the Port Development Commission. At the same time the Mayor notified Mr. McKinney that he had been placed in charge as acting Harbor Engineer.

"In his letter to the Port Commission the Mayor said of Mr. Hill: 'He has offered, however, to continue as consulting engineer to the Harbor Board and chief engineer of your commission. It is needless for me to say that his services have been valuable to the city and that, owing to his experience and judgment in matters pertaining to his work, it is my belief that it would be to the best interests of the city to accept his offer to continue serving as chief engineer of your commission and I trust you will agree with me in this matter.'

"Mr. Hill is the brother of Representative John Philip Hill, of the Third district. He was appointed Harbor Engineer by William F. Broening, former Mayor, and was one of two Republican department heads reappointed by Mayor Jackson. The other is Dr. C. Hampson Jones, Commissioner of Health. After his reappointment Mr. Hill assisted in the reorganization of the Water Department.

"In his letter to Mr. Hill accepting his resignation the Mayor said: 'Since you have been with the city you have shown great executive ability and have been capable and efficient in your professional duties. It is, therefore, with deep regret that I learn of your finding it nec-

1911 Continued

essary to resign, but in consideration of your offer to continue as adviser in the larger matters pertaining to the port development and harbor management, I must, of course, accede to your wish and accept your resignation as of September 15.'"

John Hugelman, I, reports that things are going finely with him with the Goodwin-Beach Company, at Hartford, Conn. Similarly writes C. B. Smythe, I, of his work with the Thew Automatic Shovel Company, Lorain, Ohio.

Don Stevens, II, has recently returned from a trip to Europe, where he went to inspect wire and cable plants, and says he is now "up to his eyes in work" in connection with opening up a new plant for the Okonite Company, manufacturers of electrical wires and cables.

Now boys, in closing let me call your attention to the impending All-Technology Reunion to be held in and around the Institute, June 11 and 12, 1925. Let's all make our plans to attend, and classmates, if there is sufficient interest apparent we could easily arrange to have a little 1911 week-end party the next two days — Saturday and Sunday the 13th and 14th. Write to Dennie!

Orville B. Denison, *Secretary*,
Room 3–207, M. I. T., Cambridge A, Mass.
John A. Herlihy, *Assistant Secretary*,
588 Riverside Avenue, Medford, Mass.

'12

The New York monthly luncheons are being held at the Technology Club with an average attendance of ten. As there are only about thirty-five members of the class in and around New York, this rates pretty well. Plans are under way for a big blow-out sometime in January and details regarding the exact date and location can be obtained from Dave McGrath, care of the Technology Club. Make it a point to communicate with him if possible.

V. V. Ballard, I, is now with the Yellow Cab Manufacturing Company of Chicago; home address, 2404 North Clark Street, same city. Previous to 1922, he was with the Valuation Department of the C. B. & Q. Railroad. After leaving them he spent the winter in France and England, coming back to start in with the Cab Company.

Since last month, five new members have been added to the Alumni Association. Our average is extremely low as yet, so won't everyone endeavor to go out and bring in a new subscriber? Let's go.

Frederick J. Shepard, Jr., *Secretary*,
568 East First Street, South Boston, Mass.
D. J. McGrath, *Assistant Secretary*,
Technology Club of New York, 17 Gramercy Park, New York, N. Y.

'14

The fact that these notes are being written from class headquarters instead of from the local hoosegow is no fault of Pat Adams. Those attending the reunion, who were in a condition to do so, may remember Pat's red, green and white signalling flashlight. Your Secretary was one of its admirers, so Pat got one for him on one of his trips into Northern Vermont. A couple of nights ago, your Secretary's young hopeful sent out a riot call at 12:30 a.m. and the flashlight was used to investigate the trouble. A few minutes later, after all were asleep again, the door bell rang violently and three husky officers of the law waited without. As your Secretary's house stands out rather prominently on a hilltop, it took some explaining to convince the assembled police force that the red and green lights were not some sort of a local bootlegger's code. When the officers found that the signals came from a Tech Fourteener they knew that nothing but law and order could exist.

The first of the monthly luncheons for the current season was held on Tuesday, November 11, at the Engineer's Club in Boston. No formal speaker was arranged for as the time was devoted to a general discussion of plans for the rest of the season. Those attending were Waitt, Tallman, H. S. Wilkins, C. H. Wilkins, Blakeley, Crocker, Adams, Corney and Richmond.

Alden Waitt appeared rather chesty at the luncheon but it did not take long to discover the reason. Thomas Meredith Waitt, born on September 26, is the answer.

Howard Borden was not so fortunate. He became the father of twins during the late summer, but had the misfortune to lose them both shortly after birth. The sincere sympathy of the class is extended to him and to Mrs. Borden.

Word has been received of two business changes, but all details regarding them are lacking. Fred Mackentepe is now reported to be with the Whiting Corporation at Harvey, Ill., and Arthur Stubbs has gone to Schenectady, N. Y., to join the Adirondack Power and Light Corporation.

1914 Continued

Henry Merrill, who is with the Standard Oil Co. at Shanghai, is returning home with his wife and two children and is due at his old home in Manchester, Mass., in time for Christmas.

The papers throughout Massachusetts and New York recently carried items regarding the transfer of Al Devine from Massachusetts to New York, where he will be director of headlight enforcement work of the New York State Motor Vehicle Bureau. Fourteeners residing in Massachusetts will recall that Al is responsible for the present headlight regulations in that state, which have been very helpful in reducing headlight glare and the promotion of safety for after-dark driving. Al is also chairman of the lighting committee of the Eastern Conference of Motor Vehicles Administrators, an organization of enforcement officials from sixteen of the eastern states.

Your Secretary had the pleasure of entertaining H. A. Affel on the night of November 11. Affel came up to Boston from New York to deliver a paper on carrier frequency telephony before the Boston Section of the American Institute of Electrical Engineers.

While in New York recently, your Secretary had the pleasure of meeting Sousa Brooks, Horton, Affel, Jack Hines and several others of the Metropolitan contingent. Tentative plans for an informal get-together had to be called off because of your Secretary's hasty return to Boston, occasioned by his son putting his head through a window and receiving a rather serious cut.

The Assistant Secretary has been on a five weeks' trip for Holtzer-Cabot through New York State and Ohio but reports that he did not have the good fortune to meet any Fourteeners.

During the past month two general letters were sent out from class headquarters. The first was to members who had started the payment of their class dues but who have not completed those payments. The second was to graduates who are not subscribing to The Review. The Alumni Association is trying to impress on Alumni the necessity of a unified body not only for the good of Technology, but for the alumni as well. This second letter was in connection with this drive.

Best wishes for a Happy New Year! Happy it should be, because no class dues will be assessed and because there will be a grand All-Technology Reunion in June.

H. B. Richmond, *Secretary*,
100 Gray Street, Arlington, Mass.
G. K. Perley, *Assistant Secretary*,
45 Hill Side Terrace, Belmont, Mass.

'15

The date for the All-Technology Reunion has been set for June 11 and 12. Your Secretary has attended the first meeting of the General Committee which was held a short time ago. It is probable, though the class committees have not decided as yet, that our reunion will start Friday night, June 12, and continue over Saturday and Sunday. By the time that you are reading this Review, the Committees will be actively at work in the organization of our own reunion.

At this time and particularly this year the Secretary urges upon all members of the class their duty to join the Alumni Association. There are only 119 members of our class who receive The Review, consequently our efforts to reach the men must be done directly. This condition also tends to confine the news in The Review to a relatively small proportion of the class as few members communicate with the Secretary unless they read The Review. In the last Review several items were omitted which should have been in.

We congratulate Mr. and Mrs. Douglas B. Baker on the arrival of Edith Elena on July 27, 1924. Their address is Calle Hort de la Villa, 19 Barcelona, Spain.

There are two more marriages to announce, that of Miss Olive Phillips Beebe to Mr. Parry Keller, which took place on Sunday, July 27, at Fredonia, N. Y., and that of Miss Virginia Kells to Mr. Hank Marion, which was solemnized on the 27th of September in New York City. We extend our well wishes.

R. Loring Hayward, who is a Civil and Landscape Engineer, down in Taunton, wrote the following: "Once I went to a meeting of the Western Society of Engineers, at which the subject for discussion was 'Construction Methods Used in the Panama Canal.' The meeting was a very 'windy' affair. On the way home, I rode with a well-known geologist who had said nothing during the meeting. 'Well,' he said, 'these engineering societies may be all right, but they are used too much by certain types of men to get for themselves a little free advertising.' I find the same attitude taken by a lot of the boys in regard to answering their class letters. As an example, let me quote Dan Moore who came into the office the other day. When I asked him if he had sent a letter to the Class Secretary, he said, 'No, I don't want to blow my own horn.' Therefore, I will proceed to toot it for him. I find that he is down at Pittsburgh as Designing Engineer with the New York Central Railroad. His address is 5438 Wilkins Avenue, Pittsburgh, Pa. He is looking prosperous and is as fat as ever. He mentioned having seen Francis Foote in the grill room of the William Penn one night recently. We formed a Taunton Technology Club about a year ago, and are trying to get up some enthusiasm for coming to the annual reunion in decent numbers. Are the monthly luncheons still being attended at the Tavern? If so, what is the date. (Put it in The Review.)" We endeavored to run monthly luncheons at the Boston Tavern, but were unsuccessful. It may be that the Committees on the Reunion may deem it advisable to start these again in order that there may be a monthly get-together.

The following in regard to Harold Mitchell is typical of the way many of our classmates are progressing in the business world: "Dr. Harold H. Mitchell, who was recently appointed Director of School Hygiene, City Health Department, arrived in Fall River today to assume his new duties. Dr. Mitchell brings to Fall River a very thorough understanding of school health. During the past two years as research associate of the American Child Health Association, New York City, he has made a careful study of school medical inspection, visiting schools all over the country. His knowledge of school health problems obtained by this study will be of assistance in developing an effective school health program for Fall River. Dr. Mitchell has just helped to complete a child health survey conducted by the American Child Health Association in thirty-six representative cities of between 40,000 and 70,000 population. With four other surveyors, Mr. Mitchell visited middle western cities and studied existing child health conditions. The object of the entire survey was to obtain a cross sectional view of child health throughout the country. Before becoming research associate of the American Child Health Association, Dr. Mitchell had extensive experience and training in public health work. He is a graduate of Syracuse University Medical College and of the Harvard-Massachusetts Institute of Technology School for Health Officers. For several years Dr. Mitchell was epidermologist for the Indiana State Board of Health. He has been engaged in several national and state child surveys, including a study in child health made by the Kentucky State Board of Health and a similar study conducted by the Tennessee State Child Welfare Commission. Dr. Mitchell has been interested in health work not only in this country but also abroad. Before the War he was connected with the American Red Cross Sanitary Commission during a typhus epidemic in Serbia. This Commission was under direction of Richard F. Strong of Harvard University. During the War he served in France as Division Sanitary Inspector of the Depot Division of the A. E. F."

H. Whittemore Brown is down at Hampton Normal and Agricultural Institute and is one of the real active men to whom we can always turn. He has already written about the plans for the reunion.

1915 Continued

The Secretary was honored by a visit of Mr. and Mrs. C. L. Morse and their two youngsters. They motored from Dayton up to Vermont to say good-bye to Lester's family before starting for Hawaii where Les is to be stationed. They had their courage with them as the youngest of the family was only five months old when this motor trip was undertaken.

Frank P. Scully, *Secretary*,
118 First Street, East Cambridge, Mass.
Howard C. Thomas, *Assistant Secretary*,
100 Floral Street, Newton Highlands, Mass.

'16

From the replies received to date it looks as if we would not hold our reunion until 1926 as there are six in favor of 1926 and only two for 1925. From about one hundred and sixty-five letters sent out, I have received eight answers. If you men would only write once in awhile the news of the class would be larger and we would know what the majority of the members wanted to do. As it is now and as it has been for the past two years, there are only a certain few who write no matter how many times a letter is sent out. If you want to see notes after this month in The Review, it is up to you to write your Secretary. I have written to all of you in the past year and as usual have received about sixty replies. This is your last notice and unless word comes from you now, 1916 will be among the missing classes in The Review.

The only letter received this month comes from Arizona written by Kenneth Sully and is as follows: "The last issue of The Review came yesterday and it reminded me of the fact that I had not written you since coming to Jerome. As I wanted to get back into the game of metal mining I gave up my position of chief engineer with the Gallup American Coal Company, Gallup, New Mexico, and came to Jerome to accept a job of mucking in the mine of the United Verde Copper Co. I soon got a job of chucking, then on a jack hammer and in a few months was running a Leyner machine in one of the shrinkage stopes. At the present time I am a Jigger Boss on the 1950 level. This seems to be a rendezvous for many Course III men, but of a later vintage than '16. I have met several here. I am still single and at the present writing have no matrimonial prospects."

May be the reason we cannot get more replies from the class is due to the fact that they are all getting married. This month we have received notice of three more marriages. First is that of Chester Northup Richardson and Miss Pearl Mae Darcy, which took place at Forestdale, Md., on October 30. From a note written by S. H. Woodbridge: "I am sending the enclosed clipping from a local newspaper of possible interest to your class. The lady is spoken of in high terms by those privileged to know her and is exceptionally capable in the government service, to which she has been devoted for seven years."

The marriage of James Muir Ralston and Miss Louise Bird took place at old Plymouth, Mass., on October 25. The bride is a graduate of Smith College, Class of 1916, and the bridegroom was graduated from the Massachusetts Institute of Technology the same year. He served overseas as a lieutenant of the artillery during the war. A reception was held at the summer home of the bride's parents and late in the evening Mr. and Mrs. Ralston left for an extended tour, which will terminate at Moline, Ill., where they will make their home.

The third marriage is that of Miss Grace L. Edgar, daughter of Mr. and Mrs. J. Harold Edgar of Waltham and William Sumner Chandler of Brookline, Mass. They were married on October 29 at Belmont in the All Saints' Church. Mr. and Mrs. Chandler will reside at 7 High Street, Westfield, Mass. Mr. Chandler is engaged in the sandpaper business there.

Captain J. W. Barker is now back in Boston at 27 Boylston Street, West Watertown, Mass.

From the records of classes in the 1924–25 dues campaign, published by the Executive Secretary, Orville B. Denison, 1916, is in eighteenth place. Of its 593 members on November 10, 143 had paid dues. The question is, what is the matter with the rest of the class? Our quota for November was 27 members and to date only 4 have paid up.

There are two things each member of the class should do: first, write your Secretary an interesting letter for The Review, and second, send Dennie $5.00 as dues to the Alumni Association. Will you do it?

D. N. Barker, *Secretary*,
14 Marathon Street, Arlington, Mass.

'17

That Ten-year Reunion is not so far away, and as it approaches, the minor reunions and alumni gatherings become more and more important; for instance, the annual Alumni Dinner early in January, with Bill Eddy as this year's Master of Ceremonies. Last year Seventeen had the largest class delegation and this year should see present every Seventeener within a radius of many miles. Miller is expected from

1917 Continued

Springfield, even if he cuts a Lion's Club luncheon, and some of the New York and Philadelphia gang will probably show up. A good time will be had by all, except, perhaps, Bill.—Dexter (Jeff) Tutein may not be present. He was married on December 6 to Miss Marie Louise Weightman Faries of Philadelphia.—Another of the die-hards, Bill Hunter, was married in October. He writes, in part: "Last May I got a new job. I am now Superintendent of the Whitall Manufacturing Company of this city. They make a line of silk and muslin underwear under the 'Chic' brand. I like the work and the town.—Last month I married Miss Doris G. Dickerman and we are living at 12 Chauncey Avenue, Lowell."

Carroll C. Smith wrote Professor Locke that in changing from his old job with the Anaconda Copper Company, in Montana to his new job with the duPont Company, in Delaware he and Mrs. Smith motored across the country which took eighteen days, including three days vacation and numerous short side-trips to various historical places of interest. Pleasant weather was encountered except for one day when they were near Cheyenne, Wyoming, and had a series of snowstorms.

Harold A. Knapp has left the Brown Company and is now living in Newbury, Mass.

Occasionally we must publish items that we might prefer to omit. We cannot avoid this startling disclosure in the Harvard Alumni Bulletin clipping sent us with the comment: "I always thought Dud older than the average. His guilty secret is now out." The clipping says: "Dudley Bell, '28, has been elected captain of the freshman football team. Bell prepared at Waltham High School and Phillips Exeter Academy, and played football at both schools. He has been center in all the games the Harvard freshmen have played this season."

Walt Wood writes: "Since last February I have been with the Policyholders Service Bureau, Group Insurance Division of the Metropolitan Life Insurance Company. Bill Barrett, '16, and I are holding down the engineering chairs of this Bureau. Ev Rowe, '18, and J. R. Kelly, '17, are also members of the Bureau. Ev is doing special work for the Company, and Kelly is in charge of Engineering Service in the San Francisco office.

"Barrett is now getting out for the Bureau a series of pamphlets on Foundry Practise which he and Rowe investigated together. These are causing a lot of very favorable comment.

"My work is largely consultation on Production Control methods, and on Safety. I seem to draw the large amount of traveling which some of you fellows around Boston are able to avoid. Since February I have been as far West as Oklahoma and as far North as Wisconsin, but Boston still remains too high-brow to need any help from me. However, I'm hoping that sometime I may get a chance to look in on you."

Raymond S. Stevens, *Secretary*,
30 Charles River Road, Cambridge, Mass.

'18

Already returns have been registered from the circular letter sent to members of the class regarding class assessment, membership in the Alumni Association, payment of Endowment Fund pledges, etc. It is extremely gratifying to those of us here in Boston who are trying to get these matters across to know and feel that the class is behind us. Let us see how near to a hundred per cent return we can get. That means a favorable reply from every one in the class. Have you sent your letter in yet?

The following letter has been received from Bill Ryan: "Just to prove that I have not neglected completely my duties as Course Secretary, I wish to call your attention to the arrival of Donn Edmunston Burton on October 4, 1924. As yet, I have had no opportunity to see Donn, Sr., but have no doubt he is stepping around on air and very proud to join the proud fathers of 1918. I have no other news to review, Shorty, but am threatening to start on a search for news, near news, and scandal in the near future in order to put a little more pep in the Course X section."

Max Seltzer sent in the following clipping from the *Boston Transcript* for October 14, 1924: "From Hartford, Conn., Mr. and Mrs. Seymour Norton Robinson of that city have announced the engagement of their daughter, Beulah, to William Chapman Foster of Flushing, L. I., the son of Mr. and Mrs. J. S. Foster of Stoneleigh Park, Westfield, N. J. Miss Robinson is a graduate of the Bennett School at Millbrook and is a member of the Hartford Junior League. Mr. Foster was of the Class of 1918 at Technology. He served as a lieutenant and flying instructor in the Army Air Forces during the late war."

The following announcement was received by Ken Reid: "Mr. John Albert Williams and Miss Edith Florence Locke announce their marriage on Wednesday, October the eighth, nineteen hundred and twenty-four, Baltimore, Maryland. At home after the first of November, The Colonial Arms, Jamaica, L. I., N. Y."

Jack Purves has hooked up with the American Chain Company of Bridgeport, Conn.—The following have become proud daddies in the recent past: Jack Damon, Earl Collins, and Kink Kayser. They have all reported but the data has become misplaced so we cannot tell any of the interesting details. Nevertheless, hearty congratulations from all the single men are in order.

From the Manchester, N. H., *Union* for October 27: "Friends of the bride in Manchester have received news of the wedding in Antrim on October 11 of Miss Edna Davis, elder daughter of Mr. and Mrs. Burton E. Davis, to Donald MacAskill of Kansas City, Mo. The wedding took place at the home of the bride's parents on North Branch Road. Rev. Herbert McCann, pastor of the Smith Memorial Church, officiated. The bride is a graduate of the Plymouth Normal School and has taught for several years, the last year in the Ash Street School in this city. The groom is a graduate of the Massachusetts Institute of Technology and is in business as a structural engineer at Kansas City, where the couple will live for the present."

From the *North China Star* for May 15: "The Interprovincial Highway Transportation and Motor Car Mfg. Company, Ltd., to be known briefly as the Liang-Sen Company, will shortly be established in offices on Avenue Edward VII, Shanghai. The new company is to be divided into four departments. A trading department will operate a hire service, the work of which will include letting cars by the day, month or year. A repair shop will be established in connection with the hire service, and it is hoped to start a taxi service in connection with this department. Another department will be a training school, which, in addition to teaching driving and the care of cars, will give instruction concerning motor cars to persons in the interior by correspondence films and phonograph records. There will be a consulting department to which transportation companies in the provinces may appeal. This department is to employ advisors in engineering and law. An editorial department will issue a monthly magazine dealing with the automotive industry, and it will act as go-between in the import trade. One of the features of this magazine which will be in Chinese with an English supplement will be a standardization of motor terms in Chinese. When the company has been in operation a few months, an effort will be made to get capital to erect a factory in Shanghai to turn out motor cars from materials secured in China. The General Manager of the concern is Mr. C. H. Chiang formerly with the Buick and Dodge Companies in America. He is a graduate of the Massachusetts Institute of Technology, having taken a Master of Science Degree in Aeronautical Engineering."

From the *Boston Transcript* for October 20: "Among the October

1918 Continued

weddings was the marriage at the Hotel Marlborough in Lowell of Miss Evelyn Louise McLeod, daughter of Mr. and Mrs. Alexander J. McLeod, and William Rodney MacLeod, the son of Mr. and Mrs. Murdock MacLeod. The ceremony was performed by Rev. Percy E. Thomas, pastor of the First Congregational Church of Lowell, assisted by Rev. Norman McLeod of Schenectady, N. Y., an uncle of the bride. The bridesmaids were Miss Geraldine Godfrey of Somerville, and Miss Mona Pamer of Lowell. The best man was Dr. Ainsworth Isherwood of Lowell, and the ushers were Arthur Smith, Elmer G. Swanson, Harvey E. Symonds, and Elmer I. MacPhie, all of Lowell. After the wedding a reception was held. The bride is a graduate of the Somerville schools and of the New England Conservatory of Music. The groom graduated from the Lowell High School and from the Massachusetts Institute of Technology, and is a veteran of the World War."

From the *Haverhill Gazette* for September 9, 1924: "Joseph A. Kelley, son of Mrs. Emma Kelley of Colby Street, Bradford, and Miss Frances McCann of Bangor, Maine, were married Saturday morning at St. Mary's Church, Bangor, the nuptial mass being celebrated by Rev. Martin A. Clark, assisted by the Rev. John F. Kelleher of the Sacred Heart Church, Bradford. After a wedding trip, the couple will be at home at 1167 Boylston Street, Boston. The bride is a graduate of Sacred Heart College and has been a member of the Bangor High School faculty. Mr. Kelley is a graduate of the Massachusetts Institute of Technology, and is engaged as a chemical engineer in Boston."

From the Framingham *News* for October 7, 1924: "Miss Doris E. Leland, daughter of Mrs. Celia E. Leland of 1778 Beacon Street, Brookline, and Frederick M. Estes, son of Mr. and Mrs. Frederick R. Estes of Brookline, were married Saturday afternoon at All Saints' Church, Brookline. The bride was educated in the Framingham schools. The groom graduated from Noble and Greenough, Harvard, and M. I. T. He was an ensign in the Navy during the World War and served with the Naval forces in France. After a wedding trip, the couple will be at home at 1778 Beacon Street, Brookline.

Walter Engelbrecht writes from Wilson, Okla., on November 15, as follows: "Your notice for three bucks received, and I am enclosing my check for the same right now so I will not forget it. It is worth three dollars to receive a letter from Boston. I am mailing the check to you and you can see that the Treasurer receives the same.

"I am still employed as Superintendent of the Daisy Belle Refinery, but have also branched out into the oil jobbing business so I will have plenty to do. Even at that I have plenty of time to hunt ducks and quail, which are plentiful out here in the winter.

"I hardly ever see any former Tech men here but hope to some day. I read an article in a paper where there was a move on foot to clean up the Back Bay section so the students can lead a decent life. Must be quite a wild place these days.

"Here's hoping you are in the best of health, and wishing you the best of luck, I am, with best regards to all the old Boston crowd, Cordially yours."

The Secretary wants to add here that the spirit shown in the above hits the ball squarely on the nose. Let's have some more of it.

P. W. Carr, *Secretary*,
400 Charles River Road, Cambridge, Mass.

'19

Box 1486 has a lot more room for letters and checks, but a number have already replied to the bills sent out last week, and along with these there are some very interesting notes. The following bits are of interest to us all, I'm sure.

Wally Clark sends this word from 216 Bellevue Road, Watertown, Mass.: "May your reign as Secretary-Treasurer be a happy and successful one. Since I last saw you in Newport News, I have worked in the export end of the leather trade in Boston, as a correspondent, and also with the Factory Mutual Fire Insurance people of Boston. For the past two years I have been a mortgage and insurance broker. About a month ago I moved into a new house which I built myself, or rather, had built for me, and which I may say pleases me mightily. It would be a pleasure to me to have you come and see the place and meet Mrs. Clark and my little girl, Priscilla, who was three years old last June. I see Bunny Maynard occasionally, but don't know much about the rest of the class except for what trickles (good word, Wally) through The Review. Bunny is with the Telephone Co. in Boston."

The following brief communication could only come from Oscar (Buzz) Mayer in the great metropolis: "Glad to get even so mercenary a note as your last from you! Let's hear from you when you are next in New York. My regards to all the boys you meet."

Morton Smith apparently does not find life monotonous. He writes from 181 Castle Street, Great Barrington, Mass.: "Have deserted Course VI for radio work, and am trying to keep the radio nuts of this section satisfied. Some job!" (Good luck to you, Mort, have been waiting to procure one particular kind of a set, myself, for about six months!)

1919 Continued

Hyman Selya is now chief chemist and assistant sales manager for F. E. Atteaux and Co., Inc., Dyestuffs and Chemicals. He says he is "single and happy" (Better check up with some of these married men, take Wally for example.)

The General Electric in West Lynn is still finding work for Bertram H. Southwick in the building department on "piping and miscellaneous machine installations, engineering, and supervising installation."

And here's another busy '19-er, Richard Holmgren, 208 Granite Street, Manchester, N. H., who writes of his work: "I am now designing engineer with L. H. Shattuck, Inc., Engineers and Contractors. Working mostly on hydro-electric work. Have designed and was resident engineer on a complete development with 270′ head, dam, penstock, and power house."

What is there about Tech that equips so many men for the insurance game? We find Ralph Cartwright with the Hartford Fire Insurance Co., with an office at 141 Milk Street, Boston. He must be a neighbor of Art Kenison's. Wonder if they divide the spoils when their victim happens to be a '19 man!

Here is what we consider a mighty good suggestion from down Salem way. Arklay Richards had the inspiration. This is what he says: "Still with Hygrade Lamp. How about a small reunion for the gang around Boston? Spend a week-end somewhere?" Excellent! Now, all those in favor 'spress yourself by saying "Aye" and let's get busy on it.

The check from Thomas J. Hughes is signed by the Manager of P. F. Collier & Son, Distributing Corporation and Publishers in Syracuse, N. Y. He was too modest to write about himself so we had to deduce it.

Roderick Blood's address has been changed to 181 Dudley Road, Newton Center, Mass. No other news from him.

But we really consider that George G. Fleming gets the box of chocolates for the newsiest letter. You see The Review is paying for notes by the column now in order to buy chocolates for the stenographer who really does the work, at least that's the way they seem to have figured it out. But if George will only keep up the good work, we'll see that he gets a box too! This is the kind of gossip we all enjoy: "There is not much news to send you, for the good and sufficient reason that Indianapolis apparently is somewhat off the beaten track for Tech men. I had the extreme pleasure of attending the wedding of George McCarten in Palmerton, and I believe you made notice of said wedding in the last class notes. I had occasion to be in St. Louis recently, at the wedding of Bill Freeman, Class of '20, on which occasion I found our esteemed friend, Ed Deacon. Although Ed did not know me from Adam at the time, I finally managed to get the idea across that I was a Tech man and a member of the same class. As I recall it now, Ed was mainly occupied trying to discover means of connecting with some lobster salad then going the rounds, but apparently skipping our portion of the reception room. So engrossed was Ed with the problem of ensnaring lobster salad that I could gain nothing concerning him. However, I was introduced to his wife, by the way, a most charming person as you might imagine. She informed me of two small children and the fact that Ed was President of some company, I think in the refrigerating game. George McCarten has favored me with a recent letter, describing as much as he dares the delights of matrimonial existence, and I gather that he is living in New York, engaged in the somewhat hazardous pursuit of making baking powder. Jimmy Reis has written me that the heat drove him from Arizona, although he expects to be back there in the immediate future."

I had an excellent opportunity to visit with Dean this past month when his concern, W. H. Ellis & Co., was making some repairs on our wharf. Dean had the heavy job of supervising the work but, as he was just catching the radio germ at the time, that occupied most of our time.

Congratulations are due to two members of '19 whose engagements were announced during the past month: Charles A. Chayne of Harrisburg, Pa., to Miss Esther May Allen of Brookline, Mass. Miss Allen studied at Dana Hall and was graduated at the Mount Ida School in 1920. No wedding plans have been announced.

Also James Wallace Gibson of West Newton, Mass., to Miss Lucy Whittemore Cheney of Brookline, Mass. Miss Cheney attended the Misses Ely School of Greenwich and was President of the Class of 1918. No date has been set for the wedding.

Paul F. Swasey, *Secretary*,
Box 1486, Boston, Mass.

'20

No notes have been received by The Review Editors from the secretary of this class for inclusion in the January issue. The Secretary received the usual notification that copy was due, accompanied by such news as had been compiled in The Review office. Members of the class having news or inquiries should address them to Kenneth F. Akers, Secretary, at 54 Dwight Street, Brookline, Mass.

'21

In the latter part of September, Donald A. Robbins, II, was married to Miss Mildred T. Moody. The wedding took place in Cambridge, Mass., and the couple now reside at Tulsa, Okla. Don is employed by the Bessemer Gas Engine Company.

Laurence H. Burnham, II, was married on October 6 to Miss Olive Wright. Following the wedding in Kingston, Mass., they left by automobile for Akron, Ohio.

Professor Frederick S. Dellenbaugh, Jr., VI, who received his M.S. degree with the Class of 1921, following which he became an Assistant Professor in the Electrical Department, has resigned this office to carry on additional graduate work in electricity. Before coming to Tech, Dellenbaugh received a degree in Electrical Engineering at Columbia University. While on the Faculty the crew was very much in need of a coach and at this time Dellenbaugh went up to the boat house on the Charles and gave them the necessary coaching.

V. O. Homerberg, X, as President of the Massachusetts branch of the American Society for Steel Treating, had a busy day on September 26, at the ending of their convention. Among the addresses given was one delivered by Vic in which he advocated the macroscopic examination of steel as well as the microscopic. Vic says, "macroscopic examination should precede microscopic examination in a great many cases and has many advantages in that the preparation of the sample is much simpler, larger areas can be examined and the interpretation of results is easier than in the case of microscopic examination." Among the other speakers at the same convention were Bradley Stoughton of Lehigh University, Dr. S. L. Hoyt of the General Electric Company and Professor D. J. Demarest of Ohio State University.

To the home of A. A. Orlinger, X, there arrived on September 16 at 3:30 a.m. Miss Marilyn Peretz Orlinger with a weight of exactly 3.0051 kilos. Congratulations, Abe.

In the early part of October we received word that Donald B. Lovis, XV, became engaged to Miss Margaret Stewart Spurr of Brookline, Mass. No time for the wedding has been set.

Miles M. Zoller, XV, 7631 E. Lake Terrace, Chicago, as has previously been announced, is with the Eagle-Picher Lead Company selling lead oxide. However, a letter came recently from Miles saying that Zambry Giddens is back with the Thomas Molding Brick Company in Chicago. On the 23rd of July there came an arrival to the home of Miles in the form of a great big boy who at this time weighs at least 11 lbs.

1921 Continued

Have just received word from Goose Creek, Tex., that Rich Clark, X, is a gay Brummel out chasing the skirts every night. In order to step around more lively he has bought a Chrysler roadster which makes an unbeatable combination.

On Friday, August 22, C. D. Greene, X, was married to Miss Gladys Ann Westerman at Springdale, Conn.—Last July, Maxwell K. Burckett of New York City became engaged to Miss Ethel Morrell.

Last September, Paul L. Hanson, II, was married to Miss Frances Marion Israel in Buffalo, N. Y.—We have also received word that on October 1, Sumner Hayward, X, and Miss Mary Elizabeth McCoy were married in East Orange, N. J.

R. W. Smith, XII, is with the Tennessee Geological Survey and writes that he joined the party of American Institute of Mining Engineers on their fall trip and covered that part of it which was confined to Alabama. He made various visits to Mining and Metallurgical Plants. After the trip he spent the week-end in Tuscaloosa with Cudworth, XII, and his wife. Cudworth is at the University of Alabama in Tuscaloosa. By the way, his marriage took place last August to a Wellesley graduate who came from his home town of Norwich, Conn. Smith was best man at the wedding.

Another marriage which took place in October was that of Edgerton Merrill, X, to Miss Helen T. Trenholm of New York City. —Willard A. Case, II, also was married in October to Miss Sadie W. Wenstrom. The couple now live in Salem, N. J.

S. M. Silverstein, X, has for some months been spending most of his time in Philadelphia, Pa., where he is acting as consulting engineer from the office of Bigelow, Kent & Willard of Boston in the plant of a large saw manufacturer. Silver's work is the development of lacquer finishes for the wood-working industry.

R. A. St. Laurent, *Secretary*,
431 Oliver Street, Whiting, Ind.
Carole A. Clarke, *Assistant Secretary*,
Northern Electric Co., Ltd., 121 Shearer Street, Montreal, Que.

'22

It would seem that your General Secretary was so named because he was not specific. It is now more than a year since he has offered any introductory comment of his own to the chronicles of the courses of Twenty-two, and although he doubts that anyone has noticed, he cannot escape the small voice of his own conscience. Well, this issue of The Review is the first number of the new year, and where would there be a better time to sob out repentances and resolutions of reform? Herewith, we do. (Add Curses of the Journalistic Life: it ain't even Thanksgiving Day yet, and here we are taking our New Year vows.)

We did not lapse from the public gaze through laziness, nor yet from a becoming modesty, but only because it used to be necessary for us to kill all our own stuff in order to get other and more worthwhile notes into the overcrowded pages of The Review. There was a time in 1923 when we would regularly write a couple of columns, only to throw the type out the window when it came to make-up time. After a while, we put on wisdom, and stopped writing the notes in the first place. The net result was not altered, and the saving in type-metal, which is worth $0.12 per pound, was considerable. But now that time is slowly pushing Twenty-two notes a bit nearer the middle of The Review, to make room for the youthful classes of '23 and '24, the Managing Editor of The Review can now and again find a sacrificial goat elsewhere. Hence — *Continuamus*, as the T. E. N. lads are so fond of saying every fall.

We have several changes in personnel to report. H. B. McIntyre, whose address is no longer Chicago but Box 92, Manchester, N. H., is the new Secretary for Course XV, succeeding Bill Brown, who was forced by overpressure of other work to give up the attempt at correspondence. Bill may not have contributed much written history of Course XV during the past twelve months, but he has certainly been making it with his work on a volume on Air Conditioning, which he has been slaving at for Parks-Cramer of Boston. Its erudition knocks us, as a Chemical Engineer, twenty degrees, cockeyed. Mac, as his successor for Course XV, is tackling his job with enthusiasm and promises us a bale of notes in the n. f.

Likewise, Roger Carver, 65 Thetford Avenue, Dorchester, has fallen heir to the mantle of George Ramsay as correspondent for Courses III and XII, having, in fact, debuted last month. We don't know whether George is busy or not. We know only that a dreadful attack of silence fell on him over a year ago, and he has not yet emerged. Hence our cheers for Roger. Write to him you Miners and Geologists! There are no other courses which are so excellent a ground for interesting letter writers as these. South America must be a great continent.

Now for a brief turn about the circuit with those classmates whom we have seen with our own eyes in the not too foggy past. They are all too few. We are aware that our social charms are negligible, but we always keep on hand a supply of good cigarettes and perhaps if we give more publicity to this feature our calling list will increase. . . . First, there comes to mind (since it was only yesterday) the visit of H. J. Payne, X, who is still with Chem. & Met., in its Editorial Department and appears to be liking it. . . . Then there was Lewis Tabor, likewise X, Master of Physics and

1922 Continued

Chemistry, (to say nothing of Keeper of the Radio) at the Episcopal Academy in Overbrook, Pa., but he called when we were out of town, so, that, for the moment, is that. . . . Tom Gill, IX, and his bride, we met in the Institute a few days ago, and had just time to shake hands. Tom's headquarters are Philadelphia, now. . . . Speaking of Philadelphia recalls the pleasant accident of meeting Dexter Shaw, X, in the lobby of the Adelphia about three months ago. Dex is now the chemical savant of a firm of patent attorneys whose name, faulty reporter that we are, escapes us. We think we remember that it began with an H. . . . A few days after this meeting, Walt Saunders, former inseparable of Dex, dropped in on us for an instant. . . . Johnny Strieder, VII, of Strieder and Stevens, the Mayo twins, was a p. c. a while ago. He reported having been resident physician during the past summer in a boy's camp. The Harvard Medical School still claims him and Steve during their waking hours. . . . Matt Taylor suddenly wrote us a letter the other day on the stationery of the Technology Club of Rochester, of which he is now Secretary. He didn't give us any news of himself except that his address is the traitorous one of 76 Harvard Street, Rochester, N. Y. . . . And John Giles, XII, last week sent us some interesting dope on classmates in the Klan belt, all of which we have forwarded to their Course Secretaries. Giles himself is a geologist with the Tidal Oil Company "working around Kansas and Oklahoma," which ought to give even a geologist enough room. His address is Sixth and Cheyenne Streets, Tulsa, Okla., in care of the company.

So much for that. Before we close for the month, however, let us draw attention to the coming All-Technology Five-Year Reunion to be held on June 11 and 12, 1925. These dates will mark the Third Anniversary of the Blowing Down of the Tent, and the catapulting of '22 into the World. Fitting ceremonies must mark this important event, and plans are already under way for the part '22 should play in the larger reunion. It seems obvious that the class should play as large a part in this affair as is possible without making its own Five-year Reunion in 1927 smaller by reason of any undue expense; in other words, a modest celebration of old times with as many in attendance as is humanly possible. The first years out are long ones, and the opportunity which the reunion will afford to us is not one that we can lightly afford to miss. The framework of a class committee, to coöperate with the main Alumni Association committee, already exists, and the framework will be materially added to within the next thirty days. Then, as soon as the parent committee struts some of its stuff, so will the class. Bill Russell, Johnny Strieder, Parker McConnell, Bill Brown, Fearing Pratt and Johnny Sallaway are already delegates. More will follow when the Gensec sits down to the typewriter again next month.

Course I

I have almost nothing to report this time, only one fellow having written. J. C. Aronson was the lone correspondent. He left the employ of the American Bridge Co., last August and is now with the Eastman Kodak Co., in the Building Design Department.

J. F. Hennessy, *Secretary*,
4 Cypress Street, Brookline, Mass.

Courses V and X

One by one they fall. Our glorious bachelor phalanx, once so proudly invulnerable, is gradually yielding and falling back before the onslaughts of myriad Cupids. We deny that our retreat has become a complete rout, but perforce we do admit that this ever continued mortality is having a panicy effect on those of us left behind. Up to the time of going to press we are at a loss to find a satisfactory and inclusive explanation. Can it be that our shining shields of adolescent indifference are not so blinding to the enemy as they once were? Or are we beginning to feel that our cause is lost and our hope forlorn and are suing for terms while yet we may? Or is our case similar to that of the famous horse, Heesa, in Ed Wynn's "Grab Bag" — we just don't give a darn! Be the answer what it may the following mortality statistics speak eloquently for themselves. To these fallen comrades, now in the camp of the enemy, we extend our hearty good wishes; yea, even though it may have a traitorous twang, our sincere congratulations.

From Brookline announcement is made by Mr. and Mrs. E. C. Beasley of 204 Babcock Street of the engagement of their daughter, Miss Doris Beasley, to Alan Charles Johnston of Chicago, Ill. Miss Beasley was graduated from Miss Wheelock's school with the Class of 1923.

Professor and Mrs. August Herman Gill of Belmont, Mass., have announced the engagement of their daughter, Miss Helen Gill, to Charles McKay Welling. Miss Gill, after her graduation from Mount Holyoke College in 1922, was a research assistant in Chemistry at M. I. T., receiving her Master's Degree in 1924. Mr. Welling, a son of Mr. and Mrs. George B. Welling of North Bennington, Vt., is a graduate of Course X and received his Master's Degree in 1923. At the present time he is private assistant to Dr. Gill in his consulting practice at the Institute. He is likewise research assistant in the Laboratory of Applied Chemistry.

And likewise Charley Roll receives honorable mention in this issue's list of Benedicts. Mr. Clarence Bancroft of Glen Road, Winchester, announces the engagement of his daughter, Miss Edith Stone Bancroft, to Mr. Charles Spear Roll, son of Mr. and Mrs. George J. Roll of New York City and Plainfield, N. J. Miss Bancroft is a graduate of Wellesley College.

Our General Secretary tells us that he saw Bill Rich the other day, presumably in Cambridge or Boston. "He had been in Philadelphia working for the storage battery company of like name and had contracted a little case of lead poisoning." Too bad, Bill — we are sorry. However, these periods of recuperation sometimes have their redeeming features too, so make the most of it.

S. Parker McConnell, *Secretary*,
18 Broad Street, Newark, N. J.
Eric F. Hodgins, *General Secretary*,
Room 3–205, M. I. T., Cambridge A, Mass.

'23

Another year is now pouncing upon us and the Gensec's mail box is still as empty as usual. Don't wait for a letter from your Course Secretary; send him one first, or if you don't know where he is, send it to the Gensec. The Class of '23 is pretty well scattered all over the world, but if everyone will coöperate, we can have quite a reunion every month through The Review columns.

By the way, there is going to be an All-Technology Reunion on June 11 and 12, 1925. Just keep these dates in mind and plan for a trip back to Cambridge next June. But don't wait until June to let us hear from you.

Course II

Elmer Sanborn has been transferred from the White Motor Company's factory in Cleveland, Ohio, to the Service Sales Department at the New York office. Don't be surprised if you hear about his cleaning up all comers in the mile run this winter in the Madison Square Gardens.

We see by the papers (the *Boston Transcript*, to be exact) that Edward Barnes Maynard was married in October to Miss Margaret Kimball of Newton. Mrs. Maynard is a Wheaton graduate, Class of '19. The couple will make their home in New York City.

Here is another interesting newspaper clipping concerning C. T.

1923 Continued

Ludington: "Philadelphia fliers begin On-to-Dayton race. Armed with a bar of milk chocolate for sustenance on the 485-mile trip, the sole Philadelphia representatives in the On-to-Dayton race, the first of the international air races, took off yesterday from the Pine Valley Flying Ground, N. J., at 1:20 daylight saving time. They were C. T. Ludington, Vice-President of the Aero Club of Pennsylvania, the oldest in the country, and his pilot, Robert P. Hewitt, also a member of the club. Both were naval fliers during the War. Besides two shirts and two sweaters each, the two fliers wore wide smiles of anticipation, for their machine was a new specially built model, and the weather was kind. The sun shone gayly out of a blue sky, and back of them was a strong wind, just north of east.

" 'Barring unforeseen accidents, I think we stand a mighty fine chance of winning the race,' said Mr. Ludington yesterday above the whirring of the propeller. His pilot sat in the cockpit ready to take off at any moment. 'The wind is exactly right and the plane goes like a shot. She can make 101 miles in crusing condition, and when she gets into flying condition we can easily get 110 miles out of her.' The machine in which Mr. Ludington and Mr. Hewitt are planning to bring back the laurels to Philadelphia is a two seater Farman sports bi-plane, which was built specially in France to Mr. Ludington's order at a cost of $7000. The wing span is twenty-three feet and the length from propeller to tail is eighteen feet, which is small for the type of machine, and its weight of 550 lbs. is remarkably light. The piston displacement is 500 cubic inches, and Mr. Ludington is figuring on getting twenty miles to the gallon of gas. It is fitted with a six cylinder, 70–80 horsepower engine."

Harold B. Gray, *Secretary*,
Vitreous Steel Products Co., Napanee, Ind.

Course VI

"The first five years" may be the hardest, but some of our plugging electrogists (good word in a pinch) are getting themselves on the map. A map, that is, made up of printed stationery, business cards and directories. The Secretary acknowledges a number of letters, during the past year, on stationery "all our own." One of the latest of these is from Jim Clapp, who is devoting the second year of his post-grad career to the ancient and honorable Tech labs. He writes: "I have but little dope on many of the '23, VI, men, save for J. A. Stratton and myself. Stratton spent a year studying abroad, chiefly at Grenoble. He traveled around too, visiting Switzerland, France, Germany, and England and brings back many tales from 'other lands.' He is now a special research assistant in communications and is playing with all the trick forms of measuring bridges with a view to the development of methods of high frequency measurements.

"Yours truly is still the radio scribe of the *Transcript* and is having his own troubles after foisting a new circuit on the public. In the Communication Lab we read an infinite number of dry and very messy problem papers. (It was Dinty Moore who made the remark that he would wager that there is no place in the country where such messy problem papers would be accepted, except M. I. T.) I correct lots and lotsa reports from the Communication Lab and when there isn't anything else to do I try a little studying with the hope of getting an M.S. after a while.

"E. L. Bowles, Stratton, and myself, are lords of all we survey in 4–209—the 'all' consisting of much books, papers, a few files, and some pictures of such enlightening things as the innards of a 'Stirling Boiler' and 'Whosits Flow-Meter,' etc. But I forgot, I stood the pictures all last year; E. L. B. stood them all one week; J. A. stood them not at all,—for we took 'em all down and are waiting for some one to cart 'em off.—J. H. Evans wrote to me some time ago from Pittsburgh, where he is tied up with a public service corporation in power plant work. L. E. Fogg worked during the last year for his M.S., but I have not seen him this year and do not know where he is now located.—Bill Glendinning is back again with the hard-boiled assistants in the dynamo lab, where he is slewing big red 7798's, 0093's, etc., all over the poor stude's reports. C. F. Woodbury joined up with the 'back agains' and is helping Glendinning in his notorious and bloody occupation.—J. G. Chaffee has been as remiss in his correspondence as I, so I do not know where, what, or how he is doing. The last I did hear was that he was joy riding around somewhere in Jersey with a dinky lil' super-heterodyne, or some such animal, in the bus, trying to find out how heavy the signals of WEAF were after they got 'loaded' with squittoes! He threatened to join the 'come back agains' but hasn't shown up yet.—Rod Goetchius also threatened to join the 'back agains,' after having helped stand poles up along the road, hanging wires on 'em afterward, and then talking 'via long lines' around the countryside way down at New Haven or some such place.—B. J. Stevens is in Philadelphia with the Penn Tel, I believe. He is having the time of his life, as his better half makes certain."

Paul Ryan sends in an attractive business card bearing the name: New York and Queens Electric Light and Power Co., and modestly down in the corner "Paul A. Ryan, Assistant Power Engineer." But if you call the 'phone number given, you won't get Paul, for he wrote:

1923 Continued

"I went with the company after graduation, and remained until a month ago, when I secured leave of absence and am now studying further along the same lines, taking the course in Public Utility Management at Harvard Business School, under our old friend Professor Dillon, who is now instructing at Harvard. I liked the work very much and expect to get back at it as soon as I get out of here, which by the way is a few degrees harder than Tech ever managed to be."

We want to make this column truly representative of '23-VI post-grad activities. Letters such as the above are mightily interesting to us all. Please shell out, men, and give us a new slant on life.

Albert J. Pyle, *Secretary*,
110 W. 30th Street, Wilmington, Del.

Course VII

Milt Parker, who has been at work on the problems of Heathization at the Institute for some time, is apparently making great progress and it is understood that he has some information to tell the world in this connection shortly. Besides this he is gaining publicity by remaining single. Only Milt knows when we can reserve half a column in The Review to announce the occasion. And he isn't telling!

Bernie Proctor recently called me from New York, where he was spending his honeymoon. Bernie was married on the 18th of October to Miss Miriam Hayward Patten of Malden. He still continues his work with Dr. Rowe at Boston University Medical. William Blair, Nelson Fuller, and Milt Parker were ushers at the wedding.—Phil Riley is starting his second year on the Course VII instructing staff. —Tom Duffield, when last heard from, was with the Health Section, League of Nations, where he has been traveling extensively in connection with the activities of that organization.—Smoke Fuller, as far as is known, continues his work with the Warren Oyster Co., at Warren, R. I.—Herman Swett and Gerry Fitzgerald have not been heard from for some time.

In view of the scanty news which has reached me from the members of the course, I think we will have to declare an old home week in which everyone plans to mail one letter at least besides the check for the gas and electric bill. I hereby announce that I will answer promptly all letters which I receive during the week (except the gas and electric bill).

Earle A. Griswold, *Secretary*,
Apartment 18–317 Williams Street, East Orange, N. J.

We've been waiting more or less patiently, but nevertheless in vain, for a letter from Kibbe Turner, the Course X Secretary, when lo, the answer to his seeming neglect arrives in the form of a newspaper clipping headed thus: "Turner-Merrill." Yes, it's done. Kibbe was married on October 4 to Miss Elinor Merrill of Arlington, a Boston University graduate. Congratulations, Kibbe! Mr. and Mrs. Turner are going to live in Cledenin, W. Va.—Another Course X wedding which took place in October was that of Miss Florence Foote who is now Mrs. Harold A. Landy.

Well, boys, that's all for now. Happy New Year and let's hear from you before the next issue.

Robert E. Hendrie, *General Secretary*,
12 Newton Street, Cambridge, Mass.
H. L. Bond, *Assistant General Secretary*,
Room 1–181, M. I. T., Cambridge A, Mass.

'24

Merry Christmas! We were told that this January issue of The Review would appear about the 25th of December and that it would be a nice present for our classmates if we could put in a lot of Toonerville gossip for them to read while waiting for Santa to come down the chimney. We have often heard, however, that it is more blessed to give than to receive and so we are hoping that after the presents are all opened and the turkey all put away that you will sit down and send the Season's Greetings to your Course Secretary.

That is the only time we are going to dun you for news this month, but in the future we expect we will have to do it at every opportunity in order to get any information out of some of the clams. A list too long to print in these notes has been received from the Alumni Office of members of the class who have not even reported their address to that office. If you have a guilty conscience you had better sit down and write two letters with the Seasons Greetings. It is more important for you than for the Association to keep them informed of your address because they may at some time be called upon to forward mail to you.

So much for that. It certainly brought back memories to read a little piece in The Tech a short while ago. The gist of the piece was that the various treasurers of 'Stute had been passing back and forth a bill of some dollars for a pig which to quote The Tech "succumbed at the Senior Picnic last June." It seemed to me and I think that Duffy will bear me out in this that that pig succumbed before it ever got to the picnic. The bill was for a live pig and the difficulty must have arisen over the use of the proper adjective.

And speaking of the final windup of the class reminds us of the pictures which were taken during Senior Week. Bill Robinson describes them as every move a picture. They were used as part of the entertainment at the All-Technology Smoker and The Tech says, "One of the big features of the evening was 'The Technology Follies of 1924' featuring Deacon Bill Robinson."

You are all anxious, of course, to see what your Course Secretaries have to say, so we will cut the introduction short.

Again, a Merry Christmas!

Course I

By the Supreme and Royal Decree of one O. B. Denison and one J. E. Jagger, I have been appointed Secretary Pro tem of that loyal band of draftsmen known to the ignorant public as Course I. The shock has been almost too severe to withstand. I have now to reinhale the sigh of relief which I expirated when Hosbach was elected Course Secretary. I have now to try to fill a column or so of Eric's little news sheet with the pure and unadulterated bunk of what successes we are making of ourselves and I am at a loss. Very liitle news has filtered into this city on the one train a day but I will tell you what I know at this time and trust that now that you know who has the dirty job of writing this progress sheet that in the future it will be more complete and entertaining.

First of all, no marriages or births have come to my attention. But we never were a slow bunch at school and I have hopes that as time goes on I shall have the opportunity to give you a chance to have the mirthful laugh on one and another of your coursemates.

J. E. Jagger in his underhanded letter to O. B., which brought about the foul deed of making a Secretary out of me, writes as follows: "The Review has just reached me and I notice that there was not a great deal of information at hand concerning Course I. Was not J. D. Fitch elected Secretary? I am with S. &. W. on the Bartlett's Ferry Hydroelectric project of Columbus Electric & Power Co., Columbus, Ga., at present employed in field office on design and estimates. We are building a masonry dam and earth dam, and will be installing the first two units in the far future. It's a camp job and I like the work. Found A. R. Stuckey and S. R. Evans, both '23, when I landed here. I expect to be here about two years." Ed doesn't say whether he is resident engineer or not. It is rumored about that more than engineering induced him to head South.

I have been keeping in touch with B. J. Fletcher. During the summer he tried a little cross-country stunt, driving out to the coast and back. Since then he has taken a job with the Georgia Railway

1924 Continued

and Power Co., Atlanta, Ga. He is doing field work along the investigation line and writes in part: "This country is all built on a 45° bias, so you can imagine me dangling gracefully by the legs from a tree to get high enough to squint through an instrument perched on the edge of a cliff. To be more specific, I am working for the Georgia Railway & Power Co., on a survey of prospective reservoir and dam sites. My official title is 'transitman' but it is a gross misnomer as in one short week I have done everything from chauffeuring for the big boss to drafting."

Dick Lassiter is working in Boston and still in the dance game on the side, being manager of an orchestra.

I have heard indirectly that E. O. Jones is working for some power company in or near Chicago. I seem to have lost his address.

As for myself, I am located in the Engineering Department of the Minnesota Power and Light Company, Duluth, Minn. Have been hitting all kinds of problems such as reservoir and power studies, estimating, preliminary designing, turbine testing, and have even had to use some of Eddy Miller's heat in figuring on a heating plant for one of our H. E. stations. It is distinctly a white collar job as we are not doing any construction at present, but I have hopes.

I am fully aware that these random notes have not begun to cover the field, but the only way they can be made more complete is by having you let me know where you are and what you are doing. So let's hear from you.

J. D. Fitch, *Secretary Pro tem*,
Minnesota Power & Light Co., Duluth, Minn.

Course II

Bob Reid is connected with the construction of a dam for New York City up at Gilboa, N. Y.—K. B. Castle has taken a position with the Rochester Gas and Electric Co., back in his home town, Rochester, N. Y.—George Jones announces his engagement to Miss Roselle Coleman of Boston, Mass.

Roscoe Swift and George Lindsay were wandering at large in Cambridge in October but they must have been taken in somewhere by this time.—Ed Hanley, Assistant to the Secretary, is with the Sharples Cream Separator Co. of Westchester, Pa.—El Reynolds has been married about a month and is with the Victor Talking Machine Co., in Camden, N. J.—Ray Hancock when last heard from, about two months ago, was in Jeffersonville, Ind., working as a Civil Engineer "not making much money but what he makes is good."—Justo Michelena is back getting a degree in Course VI, — ambitious youth.—I have a job with the Firestone Tire and Rubber Co. in their sales training course.

If some of you successful engineers or otherwise don't pour in some dope, these monthly notes will consist of nothing.

Fred S. Hungerford, *Secretary*,
Valley View Club, Akron, Ohio.
E. J. Hanley, *Assistant Secretary*,
20 Park Avenue, Whitman, Mass.

Courses III and XII

Al Lindsey, George Holmes, and Dan Fife are all with the Utah Apex Mining Co., at Bingham Canyon, Utah.—Ath Weston is at Jerome, Ariz., in the Engineering Department of the United Verde Copper Co.—Don Kennedy and Hugh Craigie are leading a wild life and woolly too in Mexico with the A. S. & R. Co.—West Pratt is back at school as an instructor in the Heat Treatment Department.—Sil Massari is finishing up and will get his degree at Christmas if—?—Ray Meade runs between Detroit, Birmingham and Syracuse for the Semet Solvay Co. Most of his time seems to be spent on the train.—Charlie MacBrayne is with the Illinois Zinc Co. at Peru, Ill.—Charlie Frank is finishing a thesis and broadening his mind in XV subjects.

An interesting item appeared concerning an XII man in the form of a foreign clipping from the *Natal Witness* of Pietermaritzburg, which reads thus: "Mr. W. Kupferburger, a son of the well-known Inspector of Schools in the Free State, has returned from America (says the 'Friend'), where he has been studying for a year at the Massachusetts Institute of Technology at Boston, specializing in economic geology. He took the M.Sc. at Stellenbosch, and has been lecturer in geology at the Witwatersrand University for four years. He got a year's leave of absence to go overseas. While in America he had the opportunity of getting a lectureship in Arizona."

Charles A. Frank, Jr., *Secretary*,
329 Commonwealth Avenue, Boston, Mass.
C. R. MacBrayne, *Assistant Secretary*,
745 Ninth Street, La Salle, Ill.

Course VI

Archie Carothers, the old Course VI politician, is back at Tech, and is spending part of his time in and around Boston, working on the Home Lighting Contest.—Henry Shore has been the recipient of a fellowship in the Carnegie Institute of Technology, where he is doing graduate work in electrical engineering. Walter Dunham is working in Providence, R. I., for some firm of New York contractors.

1924 Continued

—Parsons has been taking a training course with the Westinghouse Electric & Manufacturing Company.—E. Bruce, E. Carlton, and F. A. Hooper, the latter of Course XII, are working in the Research Laboratories of the American Telephone and Telegraph Co., and the Western Electric Co., at 463 West Street, New York, N. Y. Bruce is in the main laboratory, Carlton in the telephone apparatus development section, and Hooper in the Engineering Inspection Department. —Harold Hazen, John Jackson, L. (Stretch) Johnson, G. E. Rhea and R. Johnson are all research men with the General Electric Co., in Schenectady.

I have heard rumors as to the whereabouts of some of the other members. Moodie of Course II is working with the Public Service Electric and Gas Company of New Jersey at Jersey City, N. J.—Art Kallet is reported to be in New York City as is also Henry Liebman.—I have also heard that Everett Levy has been taking the New York Telephone Company's training course.

I might add on my notes, that I would appreciate it if the individual members of Course VI would send me some information as to their whereabouts. All that I have obtained to date has been by the most indirect methods and a great deal of it has been derived from hearsay. Of course this is not satisfactory to the other members of Course VI, who are looking for news of their classmates. It would simplify my task immensely and I would appreciate it greatly if the Course VI men would communicate with me.

Helen Hardy, *Secretary*,
80 Park Place, Newark, N. J.

Course VII

Charlie Fahrenbach is at the Harvard Medical School.—Phil Herrick is temporarily employed doing some vitamine research and has a very beautiful menagerie of pigs and rats in a lab at the 'Stute. —Rienzie Parker is back as an advanced student.—The information about Joe Glancy is very indefinite, but I have heard that he is in Texas doing some work at the flying school.—Charlie Blake and I are back at school doing advanced work and holding down jobs as half time assistants at the same time.

Philip K. Bates, *Secretary*,
Box 230, M. I. T., Cambridge, Mass.

Course X

Bailey and Brugmann have written to their Scribe disclosing a few cruel facts of the life of a chemical engineer.—Cliff Bailey is at Wilmington, Del., helping the duPont boys with their dyes. Cliff longs for what he used to call "East Hell on the Charles." Most everybody missed packing up and getting back to the 'Stute in October.

Brugmann and the four Macs (Farland, Grath, Kie, Coy) have joined the Godforbids and are doing the Rover Boys' stunt with X-A. At Buffalo, Brug found the men in the shops most friendly. An open hearth furnace burned out at the wall and the molten iron galloped about the pit just to entertain the boys. Some fellows are lucky. We never had such fireworks even in our labs at the 'Stute. Brug said it lasted twenty minutes at $1000 per minute. Ted Ackers and Brug went from Buffalo to Bangor in their flivver.

We saw Britt and Wharton at the Aberdeen Proving Ground doing monkey drill. Wharton has a job in the Patent Office at Washington and carries the title of 2nd Lieut., Wharton Ord., O. R. C. Britt is at home.

Johnnie Skinkle according to a clipping of *Textile World* is a member of the Faculty of the New Bedford Textile School as an Assistant in the Chemistry Department.

Hank Mac Millan is in Cincinnati with the Proctor Gamble Co.—The Secretary is rolling rouge with the hopes of developing the process according to Robby's methods of Chemical Engineering Calculations.

That is all the dirt we know and we are eager to hear more, ten tons a day as Professor Robinson would say in the Dish Pan Lab. We are making a file of Course X, 1924, and we need a photograph of every man and as much dope as he is willing to give us.

William B. Coleman, *Secretary*,
120 Broad Street, Matawan, N. J.

Course XIII

We have formed a little club which we call S. S. 5-420, and elected unanimously as our Skipper, Professor Jack. We are fourteen strong and we believe we are in closer touch with each other than any other group of our classmates. With the assistance of Gordon Joyce, I send out a monthly letter to all our members, containing the latest news of our progress, and in return a very generous response is shown by all the members.

Although we were trained to be shipbuilders, we had to forsake our trade temporarily for more remunerative work. The electrical game seems to have attracted its share, with Gordon Joyce and Ed Russell in the New England Tel. and Tel. Company. They both took the student course this summer and are now in the engineering office at Boston.—Francis Rousseau has been serving a six months' term on the deck of the S.S. Reliance of the United American Lines, learning the transatlantic passenger trade from the ground up.—Tony Rosado, Jr., spent the summer touring the States and then returned to Cuba. He is now in Glasgow, Scotland, studying further along shipbuilding lines.

One of our members, Dick Frost, who has been progressing successfully with the Biddle Smart Company at Amesbury, was married last month to Miss Pauline Roberts of Newburyport.—Gubbey Holt, after a summer at Camp Wyanoke on Lake Winnepesaukee, has returned to the 'Stute to finish up his work there.—Ingram Lee is learning the textile industry in a large Dallas Textile Mill and after recovering from an accident in which he lost his hand, he became Assistant Foreman in one of the big card rooms of the mill.

Jimmie Lord is running a granite quarry up in Maine and collecting a museum of old guns on the side.—Bill Stone is staying at the 'Stute again this year trying to master some of the old courses that have slipped out of his grasp.

El Thayer is now working for the Bethlehem Shipbuilding Corporation at Fore River, after a summer of thesis work.—James C. L. Wong is in the Turbine testing laboratory of the G. E. Lynn works. He has spent the entire summer in the various departments learning the turbine game from the ground up.—Harold Young is knocking around the West Coast studying the latest in Diesel engines. He has his Diesel engineer's license and expects to work for the U. S. Shipping Board eventually.—G. Fred Ashworth is learning the Public Utility business with Stone & Webster and is located in the Boston Office at present.

G. Fred Ashworth, *Secretary*,
147 Milk Street, Boston, Mass.
G. C. Joyce, *Assistant Secretary*,
72 Wyoming Avenue, Malden, Mass.

Course XIV

The first roll call of Course XIV shows four reporting present, (which means by letter) five accounted for, which of course means that someone else reported for them. This does not include the Secretary who may also be considered as present, which would make one-third present, one-third located and the other third temporarily lost.

The prize money for the best letter goes hands down to Norris Johnston. His was by far the longest, contained the most infor-

Classified Advertising

Mail addressed to a designation in care of this magazine will be promptly forwarded to the Advertiser

RATES

Positions Vacant: No display, 6 cents per word, minimum charge $1.50, payable in advance.

Positions Wanted: No display, 3 cents per word, minimum charge $0.75, payable in advance.

THE "POSTIONS WANTED" COLUMN IS OPEN ONLY TO MEMBERS OF THE ALUMNI ASSOCIATION IN GOOD STANDING.

Positions Vacant

ASSISTANT superintendent is wanted for a silk mill using Universal winding machinery in addition to reelers, twisters, slip winders, etc. Knowledge of silk weaving, beaming, and knitting desirable; experience in handling labor essential. In replying, state technical training, age, experience, and salary required. Address TECHNOLOGY REVIEW, D3103.

ASSISTANT superintendent wanted by a Massachusetts concern manufacturing a steel product. Graduate mechanical engineer, about thirty years old, who has had good production experience, and who is acquainted in some measure with the steel industry, will find this opportunity worth investigating. An active man with ability as a plant executive, and who is capable of being worth $4,000 a year, will be seriously considered. Address TECHNOLOGY REVIEW, D3107.

A YOUNG textile engineer who has had experience in the technical side of silk manufacture is wanted by a firm located in the South. Candidates should not be over thirty years of age, and the successful one will be paid about $3,000 a year. Address TECHNOLOGY REVIEW, D3104.

EASTERN firm dealing in chemicals is interested in finding several young Technology graduates of high character and exceptional personality to develop in its sales organization. Technical requirements are not too stringent, but great stress will be laid on the personal characteristics of the applicants in considering them. The right sort of men will find an exceptional opportunity. Address TECHNOLOGY REVIEW, D3105.

NEW York concern manufacturing and dealing in electric refrigerators has need for a man who has graduated in Civil or Mechanical Engineering and who has had a year or two of experience. Men who have specialized in refrigeration will be particularly suitable candidates. Address TECHNOLOGY REVIEW, D3106.

ONE or two young graduates trained along the lines of industrial engineering are offered an excellent opportunity with a very well-known manufacturing company located in Chicago. Men who have initiative and self-reliance, and who would be willing to work through the various departments of this company for a period of from one and one half to two years are the sort wanted. This is not a white collar job, but one in which the man would be wearing overalls and doing real work. At the end of the training period, the successful men will be given executive positions. Address TECHNOLOGY REVIEW, D3102.

WELL-known oil company requires the services of a research chemist who is thoroughly acquainted with benzol, gasolene, motor fuels and motor fuel ingredients. Applicants should outline their experience and state salary desired. Location in State of Maryland. Address TECHNOLOGY REVIEW, D3111.

1924 Continued

mation, and was the first to arrive. Listen to some of it (I wish I could print it all).

"As for my own monkey business, I am embarked on a D.Sc. in Electrochemistry, with a minor in Mathematics. The latter is to be completed this year with . . . This summer I was in the Research Lab of the General Electric Co. at Schenectady, working on the conductivity of oils, and the effect therein of added substances of a colloidal nature, and also of the nature of an electrolyte, and in each case, the effect of temperature on conductivity. The cell I used had a gap of 65 mils, and an area of 12 sq. in. and with 1000 volts, I got currents of the order of a milli-microampere!

"Swift is here as the Electrochem Assistant in Skinner's place as he expected to be. He started in over a week ago (this was October 8) and has been on the jump ever since. Piroomoff is in McCabe's place running 1051 and correcting papers also. I'll venture to bet that no mistakes get by this year. He is also taking some advanced courses. Starke is still here. He ran a mol. wt. determination on copper to-day and got 66.7 so he told me he had picked out a piece of copper with the heavier isotopes in it. He expects to get through by Christmas.

Norris's address is 820 Massachusetts Avenue, Cambridge, and it would pay you XIV-ers to write him a letter if you get anywhere near the kind of reply that I got. The next letter to come in (these are all answers to a form sent out) was from the sheik of the course, Eddie Lindstrom. Here's what he has to say.

"Please forgive an old soul who doesn't know what month of the year it is (he thought it was September but it was really October 10) for not writing but I promise I'll atone for it in the future and fill your Review from cover to cover (ah) with the news and doings of our illustrious members, only not this time.

"I haven't seen a soul since we all parted. Duffy called up one night during a visit to Boston and he said he was going to Law School at Columbia this fall. I didn't see him because we couldn't hit together.

"I'm still working for the Edison Electric Illuminating Co. of Boston. I've been transferred to our Station Engineering Department, putting new construction and apparatus in our various stations. We have got 96 stations and I have put in everything (don't pause here) from an ordinary electric light to a 5250 KVA transformer."

Eddie can be reached at 3 Gleason Street, Malden, Mass., and if you can't hit him, call him at Malden 3104–M. About the same time that Eddie was writing, Jack Walthall was also writing from Box 191, Badin, N. C. That is another good address to send letters to if you want to find out what the rest of the world does. He says in part: "In case you haven't Morgan's address it is 242 High Street, Perth Amboy, N. J. Badin is a place about the size of Niagara, Wis., so you can judge for yourself. (The rest of you XIV-ers have never seen Niagara so when I describe it, I will also be describing Badin.)

"We manufacture pig aluminum here by the electrolysis of Al_2O_3 and it is a most fascinating line of work to follow. The plant is a complete and excellent example of an elctrochemical process from start to finish. Some of the facts connected with the plant and hydro-electric station are largest spillway dam in the world, largest artificial lake in the South, and largest rotary converters in the world.

"Since being here I have never had the slightest cause to be anything but glad that I took course XIV (listen to that you Tech men who have turned shirt salesmen) and if I ever had to go back to the 'Stute again I would take the same course over. We have one other M. I. T. man here, a fellow from Boston, who took Course III."

"I have been working all summer on carrier telegraph apparatus, but about a month ago I started taking the student course, which all new engineers are required to take. It is rather interesting, as it covers all phases of the telephone and telegraph game. I think that I will stick to telegraph as soon as the course is over, however, as I like it much better.

"As you probably already know (I didn't) Liebman is with the New York Telephone Co. I saw him on the street about a month ago, and he said that he was enjoying his work very much. Incidentally I notice that I have forgotten to tell you that I am working with the American Telephone and Telegraph Company."

Having disposed of the other members of the course, I must follow the custom of other secretaries and give a few details of my own recent life. So here goes: In the northern part of Wisconsin, on the boundary line between that state and Michigan, the Menominee River forming the boundary, and nestled quite prettily between two tall hills is the little town of Niagara, the home of the "Safest Paper Mill Workers in the World." It has a population of 2000, is situated three miles from a railroad station and in the midst of quite woody country. For the information of my eastern friends there are no cowboys here, although the men do wear heavy flannel shirts.

The town's only industry is that of the paper mill of the Kimberly

Professional Cards

A Directory of Technology Graduates and Other Qualified Engineers

1924 Continued

Clark Co., in which I am employed. At present my work consists of a mill job in one of the testing stations where I work hard every day, trying to find out what it's all about. All day is not strictly correct as I am a tour worker which means here that one week I work from 7:00 a.m. to 3:00 p.m., the next week from 11:00 p.m. to 7:00 a.m., and the next week 3:00 to 11:00 p.m. In the first place, you have to get up too early, in the second, you can't sleep and in the third, sleep is all you can do. The work is very interesting and I have learned considerable about pulp and paper.

I have hopes that before many more Reviews appear we will have notes of all those indirectly reported and news from those who have not yet signed up with headquarters. Sit down and write your letter now.

Harold G. Donovan, *Secretary*,
Box 385, Niagara, Wis.
Thomas E. Mattson, *Assistant Secretary*,
43 Riverdale Street, Allston, Mass.

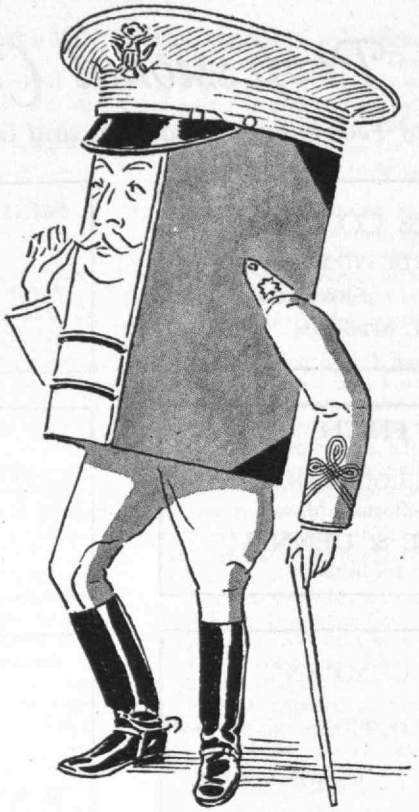
Course XV

It was a terrible blow to the members of the class and to the class itself, when they heard of the death of George Swartz, who died of heart failure on October 30 at Berkeley, Calif., while touring the country with Bob Everett. The sympathy of the class as a whole is extended to his relatives and friends.

His interest in Institute affairs and in the M. I. T. A. A. in particular gave every indication that he would be a credit and an asset to the class. As President of the A. A. last year, he did much to carry on the prestige of Tech in sports. He was a member of the Calumet Club, Osiris, Beaver, Walker Club, Varsity Club and of Phi Beta Epsilon.

Gene Cronin and Frank Barrett, VI, are both with the New England Telephone and Telegraph Co.—Paul Cardinal is with the Hoffman La Roche Chemical Co., in N. Y., and is working into the advertising end of the business.

H. G. Donovan, *General Secretary*,
Box 385, Niagara, Wis.



Is he a hard taskmaster or a loved leader?

IF you are a good soldier, you take orders from the major. But there is a great deal of difference whether you find the training an irksome routine or an enjoyable development.

When you follow the right major in your course, the work can become vitally interesting, and your college career will be more worthwhile.

"But what is my right line of work?," may be a puzzling question. All the thought you can give to finding the answer will be fully repaid. Analyze yourself and you will surely discover your natural aptitude.

And when you've found what line you feel you ought to follow, stick to it. Stand by your major and your major will stand by you.

Published in the interest of Electrical Development by an Institution that will be helped by whatever helps the Industry.

Western Electric Company

This advertisement is one of a series in student publications. It may remind alumni of their opportunity to help the undergraduate, by suggestion and advice, to get more out of his four years.

The
Massachusetts Institute of Technology
CAMBRIDGE, MASS.

The Massachusetts Institute of Technology offers Courses, each of four years' duration, in Civil, Mechanical and Electrical Engineering; Naval Architecture and Marine Engineering; Mining Engineering and Metallurgy and Geology and Geological Engineering; Architecture and Architectural Engineering; Chemistry, Chemical Engineering and Electrochemical Engineering; Biology and Public Health, Sanitary and Municipal Engineering; Physics, General Science and General Engineering; and in Engineering Administration. These Courses lead to the degree of Bachelor of Science.

To be admitted to the first year class, applicants must have attained the age of seventeen years, and must satisfactorily fulfill entrance requirements in Algebra, Plane and Solid Geometry, Trigonometry, Physics, Chemistry, English, History, and French or German and one elective subject. Examinations are required in all subjects except Chemistry, History and the elective, the requirements for which are fulfilled by the presentation of satisfactory certificates. A division of these entrance subjects between different examination periods is permitted.

Entrance examinations are held at the Institute in September. In June, applicants will be examined by the College Entrance Examination Board in Boston, New York, Philadelphia, Chicago and many other cities in America and Europe. A circular stating times and places is issued in advance by the College Board.

Graduates of colleges and scientific schools of collegiate grade, and in general all applicants presenting satisfactory certificates showing work done at another college corresponding to at least one year's work at the Institute, are admitted, without examination, to such advanced standing as is warranted by their previous training.

Graduate courses leading to the degrees of Master of Science, Master in Architecture, Doctor of Philosophy and Doctor of Science are also offered. Special research Laboratories of Physical Chemistry, Applied Chemistry and Science have been established.

PUBLICATIONS

The Institute publishes a number of bulletins designed to acquaint prospective students and others who may be interested with its requirements, facilities, instructional aims and subjects. These will be mailed gratis and post free upon request.

For general information, requirements for admission, brief description of courses, etc., ask for *Bulletin A.*

For schedules of courses and detailed description of subjects of instruction, ask for *Bulletin B.*

For the announcement of courses offered in the Summer Session, ask for *Bulletin C.*

For information on Advanced Study and Research, ask for *Bulletin D.*

For the report of the President and the Treasurer, ask for *Bulletin E.*

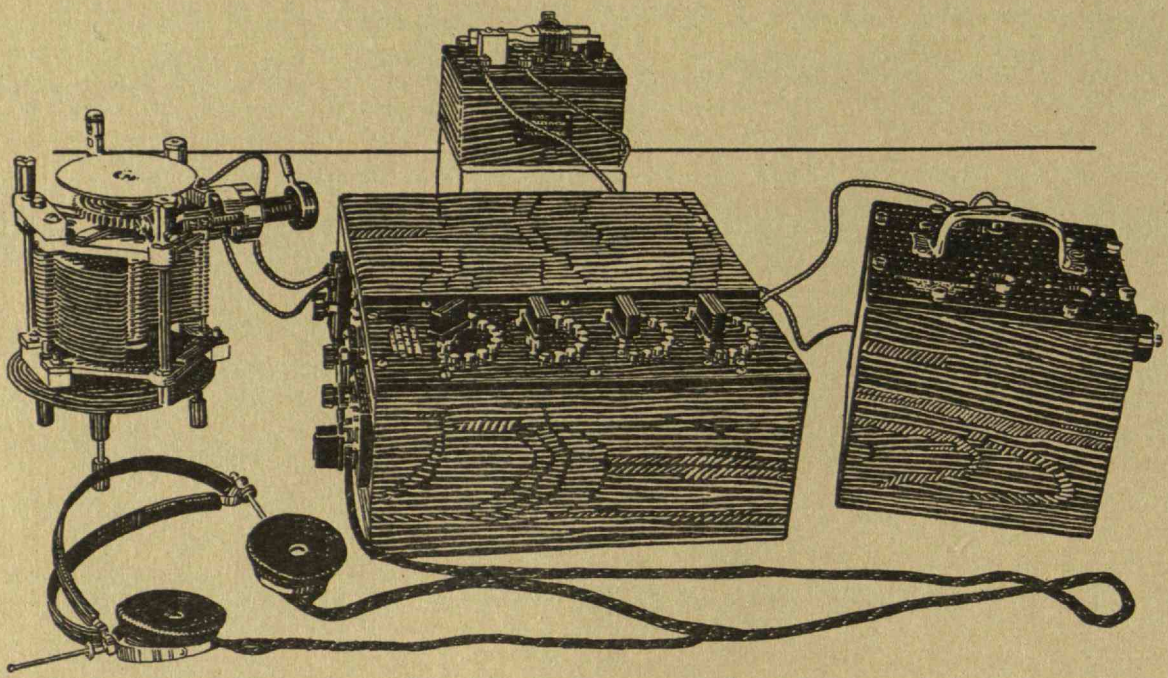
For a popularly written explanation of Engineering Course content, ask for *Bulletin Y.*

For these bulletins, or for any other information, address

THE TECHNOLOGY REVIEW BUREAU
ROOM 3-205, MASSACHUSETTS INSTITUTE OF TECHNOLOGY
CAMBRIDGE, MASS.

Perry & Elliott Co., Printers
Boston, Mass.

PRECISION IN RADIO



The science of radio has reached its present day development only by careful study of fundamental principles. In this study laboratory instruments capable of making extremely accurate measurements have been necessary.

For nearly a decade the General Radio Company has been manufacturing radio laboratory instruments and parts—the outstanding feature of which is PRECISION.

These instruments have been supplied in ever increasing quantities to many well known radio laboratories of the country, including the leading engineering colleges.

Why not let us serve you in your needs for laboratory equipment and apparatus for your home radio receiver?

Bulletin H sent on request

GENERAL RADIO CO.

MANUFACTURERS OF

RADIO AND ELECTRICAL LABORATORY APPARATUS

Massachusetts Avenue and Windsor Street

CAMBRIDGE 39 MASSACHUSETTS